

**UBS Investment Research**
**Wireless 411**

**Version 11.0**
**■ Annual comparisons for subscriber additions stayed strong**

Subscriber metrics that seemed to turn the corner in the second quarter continued to exhibit strong fundamentals. Year-over-year gross additions were up 7.9% in the third quarter after being up 3.6% in the second quarter.

**■ Cingular's improved market share from PCS, AWE, T-Mobile**

In terms of the effective market share of the national carriers, VZW, Cingular, and AWE have historically led this category. But, at the end of 2003, Cingular had fallen to fifth place among the six national carriers. Since then, however, Cingular has regained its second place ranking.

**■ CCPU up sequentially for the second consecutive quarter**

Except for a couple of exceptions, CCPU has been declining on a year-over-year basis, particularly for the national and affiliate carriers. However, the annual declines for the national operators the past two quarters are the smallest they have been in quite some time. We believe this is consistent with seasonally higher usage levels in the second and third quarters as well as increased retention efforts.

**■ Year to date, capital expenditures have come in light...**

...But companies reiterate full-year guidance. For most of 2003, capex spending has come in light for many wireless carriers. But, on third quarter conference calls, most of these companies reiterated full-year capex guidance, leaving a big slug of investment for the fourth quarter.

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## The Number You Requested...

We have compiled detailed key statistics on most of the U.S. wireless service providers. In our quarterly publication, *Wireless 411*, we review and analyze this data across the industry, including metrics relevant for analyzing the wireless services industry.

The report is divided into the following sections:

- Licensed and covered POPs.
- Subscriber and penetration figures.
- Net and gross additions.
- Service revenues and ARPU (average revenue per user).
- Price elasticity of demand (usage).
- Operating cost metrics (i.e., CPGA and CCPU).
- Operating cash flow (i.e., EBITDA and EBITDAM).
- Capital expenditures.
- Financial leverage and liquidity.

Third quarter 2003 trends were generally positive, but subscriber and churn results were mixed among operators. Year-over-year comparisons for industry subscriber additions continued to be much more favorable than in 2002. In particular, Verizon Wireless and Nextel both turned in strong subscriber results, which was aided by both companies' sub-2% monthly churn rates. ARPU in the third quarter 2003 was solid, as usage was strong, data revenues ramped and regulatory recovery fees continued to aid year-over-year ARPU comparisons.

Below we discuss in greater detail churn. Recently, there has been increased focus on monthly churn rates given the introduction of wireless local number portability (LNP) on November 24, 2003 in the top 100 U.S. markets. In our November 13, 2003 Q-Series report, "Wireless Local Number Portability—A Churn for the Worse?" we analyzed the various components of churn and isolated the parts we expect to be affected by LNP. Based on our detailed churn analysis, our forecast is for 2004 industry monthly churn to rise to 2.7% from an estimated 2.4% in 2003.

## **Sequential Increase in Churn Consistent With Historical Trends**

For the past several years, churn rates have been stubbornly high. One of the biggest and best surprises for first half 2003 operating results was the healthy reduction in monthly churn rates. However, several operators had third quarter 2003 churn rates rise above expectations. As a result, we believe fears about the impact on industry churn from LNP were reignited. Since industry acquisition costs have remained high, churn rates can have a meaningful impact on an operator's profitability.

However, even with higher than expected third quarter of 2003 churn rates of certain operators, industry churn levels are still much lower than expected, especially compared with 2001 and 2002 churn levels. Historically, there has been a seasonal pattern to churn. Specifically, over the past several years, we have seen churn levels at their lowest in the second quarter and increasing in the third quarter, while the fourth quarter has typically posted the highest churn figures of a given year. We discuss this phenomenon in more detail in the churn section below and include a graph, which shows the weighted average churn rate for the industry since the first quarter of 1999 (Chart 1).

The increase in churn in the third quarters and the historical spike in churn in the fourth quarters are consistent with the heavy holiday promotional periods, as well the expiration of prior third and fourth quarters contracts (which we refer to as "the Ghosts of Christmas Past"). The back-to-school and holiday promotions (which tend to kick off toward the back half of the third quarter) affect new and current customers. Existing customers see the new promotions and want to take advantage of them. Carriers typically let existing customers sign up for new promotions as long as they sign a new contract. As such, there is a higher percentage of customers inking new contracts and coming off prior contracts in the third and fourth quarters. Subscribers that may have signed up for their initial contracts in the first or second quarters, for example, now have their anniversary shifted to the third or fourth quarters.

The third quarter of 2002 was an anomaly in that this quarter's churn was actually higher than fourth quarter 2002 churn. A key reason for this phenomenon was WorldCom's June 5, 2002, decision to exit the wireless reseller business.

We recognize that the sequential increase in churn for selective operators (i.e., AT&T Wireless, T-Mobile, and Sprint PCS) was higher than anticipated, but this was offset by lower than projected churn rates for other operators (such as Verizon Wireless, Nextel, and Nextel Partners). Net-net, the sequential increase in the third quarter 2003 industry churn rate was consistent with prior years.

Furthermore, we believe the seasonality of churn should become more muted over time as operators continue to push two-year contracts and existing customers upgrade their handsets (and are typically locked into new contracts).

Moreover, we believe as time goes by customers will become more comfortable with their wireless carrier. While no carrier has perfect service and coverage, we believe customers tend to know where and when their phone will work and adjust accordingly. Moreover, operators are continually making service improvements, which should increase customer satisfaction.

Having said that, while we believe gross additions are becoming less seasonal, we think they will always be skewed toward the second half of each year. Unless there is a new product innovation (i.e., camera phones or Treos), which is released in the first half, there are just better reasons to buy service in the second half (i.e., back-to-school and the holidays).

## Third Quarter 2003 Trends

We highlight the following key trends in the third quarter of 2003:

- **Annual comparisons for subscriber additions stayed strong in the third quarter.** Subscriber metrics that seemed to turn the corner somewhat in the second quarter (particularly in terms of net additions) continued to exhibit strong fundamentals. Year-over-year gross subscriber additions were up 7.9% in the third quarter after being up 3.6% in the second quarter. The second quarter was the first time since the fourth quarter of 2001 in which year-over-year gross subscriber additions were up.

In terms of net subscriber growth, the growth was even more impressive. Net subscriber additions for the carriers we track were up 64% versus down 47% in the year-ago period and up 29% in the second quarter of 2003.

Verizon Wireless and Nextel stood out in the quarter, as they were able to post strong subscriber growth while maintaining profitability. Cingular, on the other hand, reversed its disappointing subscriber trends in the third quarter but its margins suffered. Verizon Wireless and Nextel were able to maintain strong subscriber growth without sacrificing margins because they held their ARPUs steady and improved on their impressive churn rates. While gross additions typically come at the expense of current margins (due to increased acquisition costs), both companies were able to improve other metrics to offset these expenses. Cingular, on the other hand, saw its ARPU fall (both sequentially and year-over-year) and its churn increase sequentially.

- **Cingular's improved market share coming from Sprint PCS, AT&T Wireless And T-Mobile.** In terms of the effective market share of the national operators, Verizon Wireless, Cingular, and AT&T Wireless have historically led this category and the third quarter held true to form. But, at the end of last year, Cingular had fallen to a distant fifth place among the six national operators. Since that time, Cingular has regained its second place ranking, far ahead of the number three operator AT&T Wireless.

When comparing fourth quarter 2002 market share to the third quarter of 2003, it appears that Sprint PCS, AT&T Wireless, and T-Mobile have given up the most ground, while Cingular Wireless rebounded impressively. The company's revised message in the marketplace (i.e., "Cingular Fits You Best") as well as its catchy "Rollover" offers seems to have taken hold.

- **Cost per gross subscriber addition (CPGA) remained stubbornly high.** We believe CPGA has remained stubbornly high for the wireless carriers for several reasons. First, one area in which carriers have been promotional has been on the handset pricing side. Many carriers are offering bargains on cutting-edge handsets to new customers instead of slashing service pricing.

We believe the operators view this as a better alternative to offering upfront promotional service pricing (for reasons described in more detail later). Second, carriers are still trying to drive more sales through their direct stores. While operators indicated that these customers churn less frequently and have higher ARPU levels, costs to open these new stores most likely inflated third quarter CPGA levels. Once operators near completion of their optimal direct store count, we should start to see CPGA decline as the fixed costs associated with the company-owned stores are leveraged.

Similar to the other metrics presented, however, we believe this ratio should not be considered in isolation. CPGA is more meaningful when compared among operators in combination with churn rates and ARPU levels (or lifetime revenue per subscriber, LRPS). For example, all other things being equal, operators would typically be willing to spend more up-front marketing dollars to attract a high ARPU user rather than a low ARPU subscriber. An example of this would be Nextel, which has among the highest CPGA, but which also has among the highest ARPU. So, while we believe CPGA has remained stubbornly high in 2003, the average customer life has increased. While we certainly would like to see CPGA decrease (possibly through reductions in advertising expenses, for example), as long as the customer's average lifetime period is increasing, carriers may argue that investing in acquisition costs is worth it.

- **Monthly non-marketing cash costs (CCPU) up sequentially for the second consecutive quarter.** Notwithstanding a couple of exceptions, monthly CCPU has been declining on a year-over-year basis, particularly for the national and affiliate operators. However, we have seen two consecutive quarters of sequential upticks in CCPU figures for the national providers and three consecutive quarters of sequential upticks in CCPU figures for the regional providers. We believe this is consistent with seasonally higher usage levels (and ARPUs) in the second and third quarters compared with the first quarters.

Moreover, we believe increased retention efforts by wireless carriers negatively affected this metric in the past two quarters. Namely, carriers have been aggressively courting customers to sign fresh two-year contracts (in advance of wireless local number portability) by offering prerequisites such as discounted (or even free) new handsets. These retention expenses are booked in CCPU by most carriers. As such, CCPU for the national carriers increased to \$29.14 in the third quarter of 2003 from \$28.00 in the first quarter and \$28.47 in the second quarter. And, while these figures are down year-over-year, the annual declines the past two quarters are the slowest they have been over the entire measurement period.

- **Year to date, capital expenditures have come in light, but companies reiterate full-year guidance.** For most of 2003, capital spending has come in light for many wireless operators. But, on third quarter conference calls, these companies reiterated full-year capex guidance, for the most part, leaving a big slug of investment for the fourth quarter of 2003.

AT&T Wireless's capex (including internal use software) was \$943 million, bringing its year-to-date capex spending to \$1.913 billion. However, the company reiterated its \$3.1 billion capex guidance for 2003. Similarly, Sprint PCS spent \$491 million in the third quarter, bringing its year-to-date total to a mere \$1.2 billion. However, the company reiterated its guidance of \$2.1 billion in capex spending for the year. For the third quarter, Cingular's capital expenditures were \$1.008 billion, which brings the company's year-to-date spending to \$2.165 billion. The company will still need to have a strong fourth quarter to hit its \$3.4-3.8 billion year-end target.

## Reporting Format

In our publication of *Wireless 411*, we compile data on 25 U.S. Wireless providers. We group the data and calculations into three categories: national, affiliate, and regional operators. We believe this presentation of the data is more user-friendly and allows for easier comparisons among operators.

We generate a database with the latest results for all these companies, and our report reflects consolidation within the group when pro forma figures are available.

The figures for AirGate PCS no longer reflect the results of iPCS since the company has filed for bankruptcy and AirGate PCS no longer reports iPCS's results. We have removed all historical iPCS figures from AirGate PCS's results.

Horizon PCS, one of the private Sprint affiliates, did not report its third quarter results after filing for bankruptcy on August 15, 2003. We have left in the historical figures, but have adjusted any year-over-year comparisons to exclude Horizon PCS.

On August 19, 2003, Dobson announced that it had completed the acquisition of American Cellular. We now show the combined results for Dobson and American Cellular under Dobson for the entire measurement period.

CenturyTel's wireless business was acquired by ALLTEL on August 1, 2002. Accordingly, the results from CenturyTel are now included in ALLTEL's results, starting with the third quarter of 2002. We will continue to report historical results for CenturyTel for comparative purposes because ALLTEL did not provide historical pro forma figures to reflect the CenturyTel acquisition.

## Licensed and Covered POPs

In Tables 1-2, we detail the licensed and covered POPs (population) for the bulk of the U.S. wireless operators. The licensed POPs represent the total population for the territory in which the operators are “licensed” by the Federal Communications Commission (FCC) to provide service, whereas the covered POPs represent the portion of the population that the networks actually “cover.” We believe covered POPs are a better indication of the target market for the various operators, since it is unlikely that people would purchase a wireless service that did not work where they lived.

For cellular operators, we assumed that their networks cover essentially the entire territory and, therefore, the licensed POPs and the covered POPs are identical. We believe this is a fairly safe assumption, given that the cellular operators began deploying their networks as early as 1983 and, therefore, should be covering the majority of the population by now. Also, the cell site radius at the cellular (850 MHz) spectrum is much larger than the radius of the PCS (1.9 GHz) spectrum, generally leading to better coverage by the cellular operators in the secondary and rural markets.

In the tables, we have excluded the licensed and covered POPs for affiliates from national providers’ figures.

Including affiliates, we calculate that Verizon Wireless (roughly 260 million covered POPs, including Alltel’s nonoverlapping POPs) and Sprint PCS (roughly 258 million covered POPs, including its affiliates) have the most extensive “on-network” national coverage. For Verizon Wireless, we included our estimate of the nonoverlapping ALLTEL-covered POPs in this calculation since Verizon Wireless and ALLTEL have a master roaming agreement with an “on-network” cost structure.

AT&T Wireless (about 242 million covered POPs, including affiliated operators), Nextel (241 million covered POPs, including Nextel Partners), and T-Mobile (roughly 224 million covered POPs) have slightly less extensive “on-network” national coverage (including their affiliates) compared with Verizon Wireless and Sprint PCS.

Cingular, with about 222 million covered POPs, has benefited from a joint venture agreement between itself and T-Mobile that gives Cingular a presence in New York City. However, we believe Cingular still offers inferior “on-network” national coverage on a relative basis. For instance, there are still several other top 100 markets in which Cingular does not have a presence (e.g., Phoenix, Denver, Minneapolis, and Pittsburgh).

**We believe covered POPs are a better indication of the target market**

**We estimate that Sprint PCS and Verizon currently have the most extensive “on-network” national coverage (including affiliates)**

In the case of T-Mobile, while the company has as many POPs as AT&T Wireless, we believe it has inferior network coverage in the secondary markets and connecting highway corridors relative to the other national operators. To make matters worse, in our view, T-Mobile does not offer its customers dual-band phones, which would enable them to roam onto cellular networks (i.e., 850 MHz) when they find themselves in uncovered territories.

As shown in Table 2, with the exception of select operators that have launched new markets (i.e., Cingular in New York City and T-Mobile in California and Nevada) or completed acquisitions (e.g., ALLTEL, AT&T Wireless, U.S. Cellular, Verizon Wireless), covered POP growth basically has trailed off within the past year. This is not to say that companies are not adding coverage cell sites; however, the incremental coverage afforded by these cell sites is typically for improved highway coverage or to eradicate “dead” spots. These coverage sites generally do not increase covered POP figures to a significant degree. Moreover, carriers (such as Verizon Wireless in New York City) are rapidly adding cell sites for capacity in selected markets.

Regional and affiliate carriers have varying levels of exposure to local number portability (LNP) depending on what percentage of the covered POPs fall within the top 100 markets. The FCC delineated the top 100 markets for the November 24, 2003 deadline. The remaining markets are scheduled for LNP rollout in May of 2004. While national providers have broad exposure, affiliates and regional providers have less of their covered POPs in the top 100 markets.

For example, U.S. Cellular estimates that 60% of its POPs will fall into this category. Nextel Partners estimates that 60% of its POPs are located within the top 100 markets. However, we believe this equates to only 45% of Nextel Partners’ subscriber base as of the third quarter of 2003. ALLTEL mentioned on its third quarter 2003 earnings conference call that about 40% of its wireless subscribers will be subject to the top 100 market. And, of Triton PCS’s 13.6 million POPs, management said approximately 35% (or six markets) would be LNP eligible for the first phase on November 24, 2003.

Table 1: Licensed POPs (in thousands)

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
T-Mobile	263,194	265,134	265,134	265,134	277,400	277,400	277,400	277,400
AT&T Wireless	216,589	258,000	258,000	258,000	258,000	260,000	263,000	264,000
Verizon Wireless	248,000	250,000	250,000	252,000	252,000	252,000	252,000	262,000
Cingular	219,000	219,000	219,000	219,000	219,000	231,000	236,000	236,000
Nextel	227,338	227,907	228,476	229,048	229,620	230,194	230,770	231,347
Sprint PCS	207,032	207,024	207,736	208,168	208,883	209,600	210,319	212,540
<b>Affiliate Operators</b>								
Nextel Partners	50,800	50,800	50,800	52,000	52,000	53,000	53,000	53,000
US Unwired	16,100	17,600	17,600	17,600	17,600	17,600	17,600	17,600
Alamosa PCS	15,600	15,800	15,800	15,800	15,800	15,800	15,800	15,800
Triton PCS	13,567	13,567	13,567	13,600	13,600	13,600	13,600	13,600
UbiquiTel	11,100	11,100	11,100	11,100	11,100	11,100	11,100	10,000
AirGate PCS	7,100	7,100	7,100	7,100	7,100	7,100	7,200	7,410
Horizon PCS	10,200	10,200	10,200	10,200	10,200	10,200	10,200	NAV
TeleCorp	37,000	NAV						
<b>Regional Operators</b>								
Alltel	49,516	51,107	51,107	59,393	59,008	60,019	60,163	60,368
Leap Wireless (Cricket)	53,400	53,900	53,600	53,600	53,600	53,600	53,600	52,700
US Cellular	30,625	31,467	30,384	41,048	41,048	41,288	41,288	45,817
Qwest	28,724	29,095	29,200	29,577	29,958	30,345	30,736	31,133
Centennial PCS	15,491	15,491	15,491	11,100	11,100	11,100	11,162	11,200
Dobson Communications	11,351	10,709	10,709	10,709	10,709	10,709	11,092	11,092
Western Wireless	10,240	10,487	10,487	10,575	10,582	10,582	10,582	10,373
Centennial Cellular	6,017	6,017	6,017	6,017	6,017	6,017	6,122	6,122
Rural Cellular	5,893	5,893	5,893	5,893	5,893	5,893	5,962	5,962
Cincinnati Bell	3,403	3,416	3,429	3,441	3,454	3,467	3,480	3,493
Century Telephone	12,316	NAV						

Source: Company reports and UBS estimates

**Table 2: Number of Covered POPs (in thousands)**

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Verizon Wireless	221,000	223,000	223,000	227,000	228,000	233,000	233,000	234,000
T-Mobile	152,300	162,000	162,000	211,000	217,900	224,000	224,000	224,000
AT&T Wireless	167,682	201,000	201,000	205,000	213,000	213,000	219,000	224,000
Cingular	189,000	189,000	189,000	216,000	216,000	216,000	216,000	222,000
Nextel	197,000	198,000	199,000	200,000	200,000	203,000	203,000	203,000
Sprint PCS	191,000	192,000	192,000	198,000	198,000	198,000	199,000	199,000
<b>Affiliate Operators</b>								
Nextel Partners	33,100	34,500	35,500	36,000	36,300	36,600	37,400	38,000
US Unwired	10,800	12,100	12,500	12,600	12,600	12,700	12,700	12,800
Alamosa PCS	11,200	11,500	11,500	11,500	11,800	11,800	11,900	11,900
Triton PCS	10,847	10,847	10,847	11,000	11,000	11,077	11,077	11,077
UbiquiTel	7,100	7,200	7,380	7,600	7,800	7,800	7,800	7,800
AirGate PCS	6,000	6,000	6,000	5,900	5,900	5,900	6,000	6,100
Horizon PCS	6,900	7,200	7,400	7,400	7,400	7,400	7,400	NAV
TeleCorp	33,300	NAV						
<b>Regional Operators</b>								
Alltel (1)	49,516	51,107	51,107	59,393	59,008	60,019	60,163	60,368
US Cellular	25,670	27,548	27,548	36,568	36,568	36,759	37,572	36,072
Leap Wireless (Cricket)	24,277	25,400	25,400	25,400	25,400	25,500	25,500	25,400
Qwest	19,476	21,631	21,945	21,899	22,189	22,528	22,342	22,463
Dobson Communications (1)	11,351	10,709	10,709	10,709	10,709	10,709	11,092	11,092
Western Wireless (1)	10,240	10,487	10,487	10,575	10,582	10,582	10,582	10,373
Centennial PCS	12,483	12,483	12,900	9,324	9,324	9,324	9,376	9,408
Centennial Cellular (1)	6,017	6,017	6,017	6,017	6,017	6,017	6,122	6,122
Rural Cellular (1)	5,893	5,893	5,893	5,893	5,893	5,893	5,962	5,962
Cincinnati Bell	2,500	2,525	2,550	2,575	2,600	2,625	2,650	2,650
Century Telephone	8,435	NAV						

(1) For cellular providers, we have assumed that covered POPs are equal to licensed POPs.

Source: Company reports and UBS estimates

## Subscriber/Penetration Figures

Based on our calculations, we estimate that there were 152.2 million wireless subscribers in the United States at the end of the third quarter of 2003. This equates to roughly 53% of the U.S. population, a penetration rate still well below the levels of Europe and Asia. While we expect the U.S. total subscriber base to continue increasing, we do not expect the penetration rates to reach those of Europe in the foreseeable future. We believe the stubbornly high cost to add a subscriber (Table 35) contributes to the United States' lower wireless penetration rate. With the high cost to add a customer, it is often not profitable to penetrate the lower demographics.

**Estimated wireless penetration in the United States was roughly 53% at the end of the third quarter of 2003**

Table 3 ranks operators by the number of end-of-period subscribers. Our survey accounts for 144.7 million subscribers in the United States at the end of the third quarter of 2003. Based on first half 2003 figures, we estimate that we have captured roughly 95% of the total U.S. subscriber base (using first half 2003 CTIA figures as the proxy; 140.9 million from our survey divided by 148.1 million industry subscribers). As shown in the table, the ranking of the six national providers at the end of the third quarter of 2003 was:

- (1) Verizon Wireless, with 36.0 million subscribers.
- (2) Cingular, with 23.4 million subscribers.
- (3) AT&T Wireless, with 21.9 million subscribers (excluding affiliates).
- (4) Sprint PCS, with 15.5 million subscribers (excluding wholesale and affiliates); 19.3 million subscribers, including the Sprint PCS affiliates and Sprint PCS's wholesale customers.
- (5) Nextel, with 12.3 million subscribers excluding Nextel Partners (13.5 million subscribers including Nextel Partners).
- (6) T-Mobile, with 12.1 million subscribers.

The six national operators, excluding their affiliates, account for roughly 84% of the total subscribers in our survey, which is up slightly from the 83% posted in the third quarter of 2002.

Table 4 details the digital subscriber bases per operator. For the wireless operators in the 1.9 GHz band (the PCS operators) and Nextel, essentially 100% of the subscriber bases are digital and, therefore, the number of digital subscribers is equal to the number of total subscribers for these operators. We have summed digital subscribers for the individual operators to arrive at the total estimated digital subscribers in the United States.

In Table 5, we have shown digital subscribers as a percentage of the total industry subscribers. As shown in the table, we estimate that roughly 95% of the U.S. subscriber base is now digital, up from roughly 90% at the end of the third quarter of 2002 and up from about 94% at the end of the second quarter of 2003.

**We estimate that roughly 95% of the U.S. subscriber base is digital**

The past three quarters have seen sequential increases in digital subscribers as a percentage of total subscribers below 1%. Given the widespread availability of digital services, perhaps the cellular carriers are reaching a ceiling in terms of further gains. In other words, there are some customers for which operators will find it difficult to move to digital including “glove box” or safety users. Also, there might be some remote areas in which analog service still makes sense.

Western Wireless had virtually no sequential increase in digital subscribers during the third quarter 2003. However, the company has made substantial headway in this metric during the measurement period, going from 24% at year-end 2001 to 70% in the third quarter of 2003. According to the company’s 10-Q, at September 30, 2003, approximately 60% of the population in its service territory had access to digital service.

In Table 6, we rank the operators by penetration rates per covered POP. The covered POPs represent the portion of the population that the operators’ networks actually cover (i.e., there is a signal for service in these areas). We have assumed the cellular operators cover 100% of their licensed territory. We believe this is a fairly safe assumption, given that the cellular operators have, for the most part, been building out their networks for the past 15 years or so.

Table 6 indicates that, with the exception of Cincinnati Bell (an operator in the 1.9 GHz range), the incumbent (cellular) operators have higher penetration rates than the new entrants. This is logical, given that the incumbent operators have had the benefit of time. Wireless networks began deployment with first-generation technology (analog) in 1983 (in the metropolitan areas), with rural deployment in the late 1980s to early 1990s. However, the penetration rates of the rural cellular operators are quickly catching up to those of the metropolitan cellular operators because there is, for the most part, less competition from new entrants in these areas. The new entrants (using the PCS licenses)—with second-generation (2G) digital networks—did not enter the picture until the mid- to late 1990s.

**Except for Cincinnati Bell, the incumbent operators have higher penetration than the new entrants**

In Table 7, we detail the annual incremental covered POP penetration, which we calculate by subtracting the prior-year penetration from the current penetration. This calculation is not on a same-store basis and, therefore, distorts the incremental penetration of operators that are launching new markets or making acquisitions or divestitures. Therefore, this metric is more relevant for operators that have launched coverage in the majority of their licensed POPs and less relevant for operators that are launching new markets or acquiring properties. However, we believe the majority of the operators are nearing completion of their buildouts (in terms of covered POPs) and, therefore, this metric should be more meaningful for comparison across the majority of operators.

Moreover, annual incremental penetration of covered POPs is a trailing measure and may not be a projector of future performance. However, Nextel and Verizon Wireless continued their string of steady, strong, and consistent subscriber growth. In the third quarter 2003, Nextel posted 1.0% annual incremental penetration of covered POPs. As shown in the table, Nextel has posted the most consistent results among the national operators. We believe this consistency is due to the high percentage of phones the company adds through its existing enterprise accounts. Accordingly, we believe Nextel has strong visibility in terms of subscriber growth because of its corporate relationships. Moreover, as Nextel offers a differentiated product, the company is less prone to market share shifts as a result of short-term promotions in the marketplace.

Verizon Wireless's annual incremental penetration of covered POPs over the measurement period had been in a tight 0.8-1.0% range until the most recent two quarters. In the third quarter, Verizon Wireless posted 1.5% annual incremental penetration, versus 1.3% in the second quarter of 2003. Moreover, Verizon Wireless has led the national operators in this measure for each of the past three quarters (and tied with Nextel for the two quarters preceding those).

Cingular posted 0.3% annualized incremental penetration of its covered POPs in the third quarter of 2003. This represents the company's first quarter of positive annual incremental penetration as the prior quarters were negatively affected by the launch of New York City in the third quarter of 2003. AT&T Wireless has posted anemic annualized incremental penetration growth for the past seven quarters. In its most recent 10-Q filing, AT&T Wireless said that competitive pressures as well as its continued focus on improving the profitability of its customer base negatively affected subscriber growth during the quarter. We believe the latter statement has to do with AT&T Wireless's initiative to get heavy TDMA roamers onto its new GSM platform since the company's GSM roaming rates are significantly less than its comparable TDMA roaming rates. Management conceded that some subscribers took this opportunity to leave AT&T Wireless instead of agreeing to move to GSM.

As for the affiliates, Nextel Partners posted 0.8% for the third quarter of 2003, after three consecutive quarters of 0.9% penetration gains (which is just below the results posted by Nextel). Triton PCS posted its sixth consecutive quarter of declining incremental penetration gains. In the regional operator space, Western Wireless posted three consecutive quarters of increasing penetration gains after posting negative figures for three straight quarters.

In Table 8, we ranked the operators by their subscriber growth rates. For this calculation, we take the internal net additions and divide by the previous quarter's ending subscriber base. Then, we multiply by four to annualize the growth rate. We believe this calculation helps nullify the impact of subscribers gained through acquisitions.

The operators exhibiting higher subscriber growth rates are typically those with the lower total subscriber bases. Some of this growth is simple math, as the new entrants are starting at a lower subscriber base. T-Mobile has posted the top subscriber growth among the nationals for the entire measurement period. However, T-Mobile is the smallest of the national players in terms of subscribers, thereby aiding its growth statistics. Also, the growth rate for T-Mobile peaked in the fourth quarter of 2002 at 45.7% and has declined to 23.4% in the third quarter of 2003. In essence, T-Mobile has come back to the pack as it has attained more of a critical mass of customers.

We also highlight the strong showing by Nextel, which has come in second in subscriber growth rates among the nationals for seven consecutive quarters. We believe Nextel has been able to post strong subscriber growth because of its ability to retain its current customers (i.e., keep its churn low), as well as add new customers. Nextel increased its annualized subscriber growth in the third quarter of 2003 to 22.1% versus 19.9% in the third quarter of 2002 and 21.3% in the second quarter of 2003.

The third quarter of 2003 was the fifth consecutive quarter of double-digit subscriber growth rates for Verizon Wireless. The company posted 16.3% growth in the third quarter of 2003 versus 10.6% in the third quarter of 2002. Cingular posted its third consecutive quarter of positive subscriber growth after two quarters of negative growth. The company had 13.2% growth in the third quarter of 2003 versus a 1.9% decline in the third quarter of 2002.

Table 3: End of Period Subscribers

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Verizon Wireless	29,398,000	29,584,000	30,307,000	31,521,000	32,491,000	33,324,000	34,619,000	36,026,000
Cingular	21,596,000	21,830,000	22,183,000	22,076,000	21,925,000	22,114,000	22,640,000	23,385,000
AT&T Wireless	18,047,000	19,536,000	19,953,000	20,154,000	20,859,000	21,116,000	21,493,000	21,855,000
Sprint PCS	13,555,000	14,280,000	14,588,000	14,510,000	14,760,000	14,930,000	15,290,000	15,474,000
Nextel	8,666,500	9,167,300	9,636,300	10,116,100	10,612,100	11,092,100	11,683,100	12,329,100
T-Mobile	6,992,600	7,501,100	8,027,000	8,899,000	9,916,000	10,837,000	11,443,000	12,113,000
<b>National Total</b>	<b>98,255,100</b>	<b>101,898,400</b>	<b>104,694,300</b>	<b>107,276,100</b>	<b>110,563,100</b>	<b>113,413,100</b>	<b>117,168,100</b>	<b>121,182,100</b>
<b>Affiliate Operators</b>								
Nextel Partners	515,900	601,100	691,600	784,700	877,800	964,600	1,053,600	1,144,700
Triton PCS	685,653	719,198	763,525	796,486	830,159	861,654	880,685	884,252
Alamosa PCS	503,000	551,000	571,000	591,000	622,000	653,000	677,000	693,000
US Unwired	432,264	519,497	539,054	541,281	561,162	584,190	593,068	595,724
AirGate PCS	289,845	325,898	337,303	339,139	352,809	358,564	364,157	359,460
UbiquiTel	179,000	202,100	217,800	234,600	257,000	274,200	291,800	305,000
Horizon PCS	194,135	222,700	235,100	241,900	270,900	294,900	310,000	NAV
TeleCorp	1,017,836	NAV						
<b>Affiliate Total</b>	<b>3,817,633</b>	<b>3,141,493</b>	<b>3,355,382</b>	<b>3,529,106</b>	<b>3,771,830</b>	<b>3,991,108</b>	<b>4,170,310</b>	<b>3,982,136</b>
<b>Regional Operators</b>								
Alltel	6,682,964	6,763,214	6,843,411	7,558,929	7,601,598	7,760,849	7,872,260	7,928,051
US Cellular	3,461,000	3,504,000	3,547,000	3,943,000	4,103,000	4,240,000	4,343,000	4,268,000
Dobson Communications	1,332,300	1,297,300	1,333,100	1,363,000	1,399,000	1,411,000	1,565,100	1,579,500
Leap Wireless (Cricket)	1,119,106	1,387,825	1,451,588	1,496,733	1,512,120	1,513,477	1,459,707	1,478,000
Western Wireless	1,176,500	1,159,500	1,165,300	1,176,100	1,197,800	1,216,100	1,231,200	1,246,100
Qwest	1,116,000	1,114,000	1,117,000	1,084,000	1,034,000	998,000	954,000	912,000
Rural Cellular	661,908	678,161	698,923	702,797	722,373	728,706	739,015	740,484
Centennial Cellular	513,900	535,100	540,300	534,000	530,100	538,900	540,900	548,900
Cincinnati Bell	462,100	464,500	470,800	465,300	470,000	470,301	464,400	461,300
Centennial PCS	312,600	347,500	366,500	349,800	366,700	390,800	398,600	422,600
Century Telephone	797,340	789,000	783,258	NAV	NAV	NAV	NAV	NAV
<b>Regional Total</b>	<b>17,635,718</b>	<b>18,040,100</b>	<b>18,317,180</b>	<b>18,673,659</b>	<b>18,936,691</b>	<b>19,268,133</b>	<b>19,568,182</b>	<b>19,584,935</b>
<b>Total Subscribers</b>	<b>119,708,451</b>	<b>123,079,993</b>	<b>126,366,862</b>	<b>129,478,865</b>	<b>133,271,621</b>	<b>136,672,341</b>	<b>140,906,592</b>	<b>144,749,171</b>
<b>CTIA (1)</b>	<b>128,374,512</b>		<b>134,561,370</b>		<b>140,766,842</b>		<b>148,065,824</b>	
<b>% of CTIA captured by survey</b>	<b>93.2%</b>		<b>93.9%</b>		<b>94.7%</b>		<b>95%</b>	

(1) Using most up-to-date reported CTIA subscriber information (includes subscriber adjustments by carriers announced during first quarter 2001).

Source: Company reports, CTIA, and UBS estimates

Table 4: Number of Digital Subscribers—End of Period

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Verizon Wireless	21,900,000	23,900,000	25,003,275	26,792,850	28,600,000	29,700,000	31,503,290	33,504,180
Cingular	18,572,560	18,992,100	19,521,040	19,868,400	20,171,000	20,787,160	21,281,600	22,215,750
AT&T Wireless	17,027,345	18,422,448	19,114,974	19,629,996	20,441,820	20,693,680	21,063,140	21,417,900
Sprint PCS	13,555,000	14,280,000	14,588,000	14,510,000	14,760,000	14,930,000	15,290,000	15,474,000
Nextel	8,666,500	9,167,300	9,636,300	10,116,100	10,612,100	11,092,100	11,683,100	12,329,100
T-Mobile	6,992,600	7,501,100	8,027,000	8,899,000	9,916,000	10,837,000	11,443,000	12,113,000
<b>Affiliate Operators</b>								
Nextel Partners	515,900	601,100	691,600	784,700	877,800	964,600	1,053,600	1,144,700
Triton PCS	685,653	719,198	763,525	796,486	830,159	861,654	880,685	884,252
Alamosa PCS	503,000	551,000	571,000	591,000	622,000	653,000	677,000	693,000
US Unwired	432,264	519,497	539,054	541,281	561,162	584,190	593,068	595,724
AirGate PCS	289,845	325,898	337,303	339,139	352,809	358,564	364,157	359,460
UbiquiTel	179,000	202,100	217,800	234,600	257,000	274,200	291,800	305,000
Horizon PCS	194,135	222,700	235,100	241,900	270,900	294,900	310,000	NAV
TeleCorp	1,017,836	NAV						
<b>Regional Operators</b>								
Alltel	4,678,075	4,869,514	4,995,690	5,442,429	5,777,214	5,975,854	6,140,363	6,263,160
US Cellular	2,405,395	2,522,880	2,695,720	3,190,000	3,405,490	3,604,000	3,691,550	3,627,800
Dobson Communications	NAV	NAV	NAV	NAV	1,259,100	1,298,120	1,455,543	1,484,730
Leap Wireless (Cricket)	1,119,106	1,387,825	1,451,588	1,496,733	1,512,120	1,513,477	1,459,707	1,478,000
Qwest	1,116,000	1,114,000	1,117,000	1,084,000	1,034,000	998,000	954,000	912,000
Western Wireless	282,360	371,040	489,426	588,050	718,680	790,465	861,840	872,270
Rural Cellular	392,317	429,420	453,103	484,734	493,338	537,607	543,214	576,230
Centennial Cellular	377,100	405,400	420,200	424,600	431,200	450,475	460,000	469,000
Cincinnati Bell	462,100	464,500	470,800	465,300	470,000	470,301	464,400	461,300
Centennial PCS	312,600	347,500	366,500	349,800	366,700	390,800	398,600	422,600
Century Telephone	263,122	NAV						
<b>Total digital subscribers</b>	<b>101,939,812</b>	<b>107,316,521</b>	<b>111,705,998</b>	<b>116,871,098</b>	<b>123,740,593</b>	<b>128,060,147</b>	<b>132,863,656</b>	<b>137,603,157</b>

Source: Company reports and UBS estimates

Table 5: Digital Subscribers as Percentage of Total Subscribers

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Nextel	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Sprint PCS	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
T-Mobile	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
AT&T Wireless	94.4%	94.3%	95.8%	97.4%	98.0%	98.0%	98.0%	98.0%
Cingular	86.0%	87.0%	88.0%	90.0%	92.0%	94.0%	94.0%	95.0%
Verizon Wireless	74.5%	80.8%	82.5%	85.0%	88.0%	89.1%	91.0%	93.0%
<b>Affiliate Operators</b>								
Alamosa PCS	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Nextel Partners	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Triton PCS	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
UbiquiTel	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
US Unwired	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
AirGate PCS	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Horizon PCS	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	NAV
TeleCorp	100.0%	NAV						
<b>Regional Operators</b>								
Cincinnati Bell	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Centennial PCS	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Leap Wireless (Cricket)	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Qwest	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Dobson Communications	NAV	NAV	NAV	NAV	90.0%	92.0%	93.0%	94.0%
Centennial Cellular	73.4%	75.8%	77.8%	79.5%	81.3%	83.6%	85.0%	85.4%
US Cellular	69.5%	72.0%	76.0%	80.9%	83.0%	85.0%	85.0%	85.0%
Alltel	70.0%	72.0%	73.0%	72.0%	76.0%	77.0%	78.0%	79.0%
Rural Cellular	59.3%	63.3%	64.8%	69.0%	68.3%	73.8%	73.5%	77.8%
Western Wireless	24.0%	32.0%	42.0%	50.0%	60.0%	65.0%	70.0%	70.0%
Century Telephone	33.0%	NAV						
<b>Total digital as a % of total subscribers</b>	<b>85.2%</b>	<b>87.2%</b>	<b>88.4%</b>	<b>90.3%</b>	<b>92.8%</b>	<b>93.7%</b>	<b>94.3%</b>	<b>95.1%</b>

Source: Company reports and UBS estimates

Table 6: Penetration of Covered POPs

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Verizon Wireless	13.3%	13.3%	13.6%	13.9%	14.3%	14.3%	14.9%	15.4%
Cingular	11.4%	11.6%	11.7%	10.2%	10.2%	10.2%	10.5%	10.5%
AT&T Wireless	10.8%	9.7%	9.9%	9.8%	9.8%	9.9%	9.8%	9.8%
Sprint PCS	7.1%	7.4%	7.6%	7.3%	7.5%	7.5%	7.7%	7.8%
Nextel	4.4%	4.6%	4.8%	5.1%	5.3%	5.5%	5.8%	6.1%
T-Mobile	4.6%	4.6%	5.0%	4.2%	4.6%	4.8%	5.1%	5.4%
<b>Affiliate Operators</b>								
Triton PCS	6.3%	6.6%	7.0%	7.2%	7.5%	7.8%	8.0%	8.0%
AirGate PCS	4.8%	5.4%	5.6%	5.7%	6.0%	6.1%	6.1%	5.9%
Alamosa PCS	4.5%	4.8%	5.0%	5.1%	5.3%	5.5%	5.7%	5.8%
US Unwired	4.0%	4.3%	4.3%	4.3%	4.5%	4.6%	4.7%	4.7%
UbiquiTel	2.5%	2.8%	3.0%	3.1%	3.3%	3.5%	3.7%	3.9%
Nextel Partners	1.6%	1.7%	1.9%	2.2%	2.4%	2.6%	2.8%	3.0%
Horizon PCS	2.8%	3.1%	3.2%	3.3%	3.7%	4.0%	4.2%	NAV
TeleCorp	3.1%	NAV						
<b>Regional Operators</b>								
Cincinnati Bell	18.5%	18.4%	18.5%	18.1%	18.1%	17.9%	17.5%	17.4%
Dobson Communications	11.7%	12.1%	12.4%	12.7%	13.1%	13.2%	14.1%	14.2%
Alltel	13.5%	13.2%	13.4%	12.7%	12.9%	12.9%	13.1%	13.1%
Rural Cellular	11.2%	11.5%	11.9%	11.9%	12.3%	12.4%	12.4%	12.4%
Western Wireless	11.5%	11.1%	11.1%	11.1%	11.3%	11.5%	11.6%	12.0%
US Cellular	13.5%	12.7%	12.9%	10.8%	11.2%	11.5%	11.6%	11.8%
Centennial Cellular	8.5%	8.9%	9.0%	8.9%	8.8%	9.0%	8.8%	9.0%
Leap Wireless (Cricket)	4.6%	5.5%	5.7%	5.9%	6.0%	5.9%	5.7%	5.8%
Centennial PCS	2.5%	2.8%	2.8%	3.8%	3.9%	4.2%	4.3%	4.5%
Qwest	5.7%	5.2%	5.1%	5.0%	4.7%	4.4%	4.3%	4.1%
Century Telephone	9.5%	NAV						

(1) For cellular providers, equal to penetration of licensed POPs.

Source: Company sources and UBS estimates

Table 7: Annual Incremental Penetration of Covered POPs

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Verizon Wireless	0.8%	0.9%	1.0%	0.9%	0.9%	1.0%	1.3%	1.5%
T-Mobile	0.8%	0.4%	0.9%	0.0%	0.0%	0.2%	0.2%	1.2%
Nextel	0.9%	0.9%	0.9%	0.9%	0.9%	0.8%	0.9%	1.0%
Sprint PCS	1.9%	1.8%	1.6%	0.8%	0.4%	0.1%	0.1%	0.4%
Cingular	0.6%	0.6%	0.5%	-1.0%	-1.3%	-1.3%	-1.3%	0.3%
AT&T Wireless	1.5%	0.2%	0.0%	-0.5%	-1.0%	0.2%	-0.1%	-0.1%
<b>Affiliate Operators</b>								
Nextel Partners	0.6%	0.7%	0.7%	0.7%	0.9%	0.9%	0.9%	0.8%
UbiquiTel	1.8%	2.0%	1.8%	1.2%	0.8%	0.7%	0.8%	0.8%
Triton PCS	1.9%	1.9%	1.8%	1.5%	1.2%	1.1%	0.9%	0.7%
Alamosa PCS	1.5%	2.0%	1.8%	1.4%	0.8%	0.7%	0.7%	0.7%
US Unwired	1.6%	1.4%	1.2%	0.7%	0.5%	0.3%	0.4%	0.4%
AirGate PCS	3.0%	2.9%	2.6%	1.8%	1.1%	0.6%	0.4%	0.1%
Horizon PCS	1.5%	1.6%	1.3%	1.1%	0.8%	0.9%	1.0%	NAV
TeleCorp	0.6%	NAV	NAV	NAV	NAV	NAV	NAV	NAV
<b>Regional Operators</b>								
Dobson Communications	1.5%	1.7%	1.6%	1.4%	1.3%	1.1%	1.7%	1.5%
US Cellular	1.2%	0.2%	0.0%	-2.4%	-2.3%	-1.2%	-1.3%	1.0%
Western Wireless	1.0%	0.3%	-0.2%	-0.6%	-0.2%	0.4%	0.5%	0.9%
Centennial PCS	-0.1%	0.2%	0.3%	0.9%	1.4%	1.4%	1.4%	0.7%
Rural Cellular	1.1%	1.0%	1.0%	0.9%	1.0%	0.9%	0.5%	0.5%
Alltel	0.9%	0.4%	0.3%	-0.6%	-0.6%	-0.3%	-0.3%	0.4%
Centennial Cellular	0.9%	0.8%	0.7%	0.5%	0.3%	0.1%	-0.1%	0.1%
Leap Wireless (Cricket)	2.2%	1.9%	2.1%	2.2%	1.3%	0.5%	0.0%	-0.1%
Cincinnati Bell	4.0%	2.6%	1.5%	0.4%	-0.4%	-0.5%	-0.9%	-0.7%
Qwest	0.8%	0.3%	-0.2%	-0.6%	-1.1%	-0.7%	-0.8%	-0.9%
Century Telephone	0.3%	NAV	NAV	NAV	NAV	NAV	NAV	NAV

Source: Company reports and UBS estimates

Table 8: Quarterly Subscriber Growth Annualized

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
T-Mobile	42.2%	29.1%	24.1%	43.5%	45.7%	37.2%	22.4%	23.4%
Nextel	24.5%	23.2%	20.6%	19.9%	19.9%	18.1%	21.3%	22.1%
Verizon Wireless	10.0%	1.6%	9.8%	10.6%	12.2%	10.2%	15.5%	16.3%
Cingular	6.1%	4.3%	6.5%	-1.9%	-2.2%	3.4%	9.8%	13.2%
Sprint PCS	35.8%	21.4%	8.6%	-2.1%	6.9%	5.4%	9.6%	4.8%
AT&T Wireless	21.7%	14.4%	8.5%	4.0%	14.0%	4.9%	8.4%	4.3%
<b>Affiliate Operators</b>								
Nextel Partners	75.3%	66.1%	60.2%	53.8%	47.5%	39.6%	36.9%	34.6%
UbiquiTel	143.7%	51.6%	31.1%	30.9%	38.2%	26.8%	25.7%	18.1%
Alamosa PCS	98.0%	38.2%	14.5%	14.0%	21.0%	19.9%	14.7%	9.5%
US Unwired	77.9%	42.7%	15.1%	1.7%	14.7%	16.4%	6.1%	1.8%
Triton PCS	43.9%	19.6%	24.7%	17.3%	16.9%	15.2%	8.8%	1.6%
AirGate PCS	93.3%	49.8%	14.0%	2.2%	16.1%	6.5%	6.2%	-5.2%
Horizon PCS	129.6%	58.9%	22.3%	11.6%	48.0%	35.4%	20.5%	NAV
TeleCorp	44.5%	NAV	NAV	NAV	NAV	NAV	NAV	NAV
<b>Regional Operators</b>								
Centennial PCS	16.0%	44.7%	21.9%	14.7%	19.3%	26.3%	8.0%	24.1%
Western Wireless	6.6%	-5.8%	2.0%	3.7%	7.4%	6.1%	5.0%	6.8%
US Cellular	9.7%	3.6%	4.9%	8.6%	16.2%	13.4%	9.7%	6.1%
Centennial Cellular	9.0%	16.5%	3.9%	-4.7%	-2.9%	6.6%	1.5%	5.9%
Leap Wireless (Cricket)	217.9%	96.0%	18.4%	12.4%	4.1%	0.4%	-14.2%	5.0%
Dobson Communications	17.1%	6.8%	11.0%	9.0%	10.6%	3.4%	5.2%	3.7%
Alltel	5.8%	4.8%	4.7%	4.0%	2.7%	2.5%	4.2%	2.5%
Rural Cellular	8.9%	9.8%	12.2%	0.4%	11.1%	3.5%	5.7%	0.8%
Cincinnati Bell	23.0%	2.1%	5.4%	-4.7%	4.0%	0.3%	-5.0%	-2.7%
Qwest	16.8%	-0.7%	1.1%	-11.8%	-18.5%	-13.9%	-17.6%	-17.6%
Century Telephone	1.3%	-4.2%	-2.9%	NAV	NAV	NAV	NAV	NAV

Source: Company reports and UBS estimates

## Net and Gross Additions

In Tables 9-16, we document the gross additions, churn, and net additions for the industry players we monitor. The gross additions represent the number of customers making wireless decisions (i.e., signing up for a wireless service). Not all these customers are new to wireless; some may be switching from one operator to another (e.g., a customer switching from one operator to another would be a gross addition for one operator and a disconnect for the other).

In Table 9, we detail the gross additions of each operator and, in Table 10, we show the year-over-year growth in gross additions. Table 9 shows that the total gross additions of the operators we track (which we believe represents a large proportion of the U.S. market) were 14.5 million in the third quarter of 2003. This represented a 7.9% increase over the third quarter of 2002. The third quarter 2003 represented the second consecutive quarter of positive year-over-year growth after four quarters of negative growth.

In terms of gross additions, Verizon Wireless has posted the best results of any company we track throughout the entire measurement period. Verizon Wireless posted almost 3.4 million gross additions in the third quarter of 2003, which represents approximately 27.0% of the gross adds for the national providers (up from 26.0% in the third quarter of 2002). Conversely, Sprint PCS was only able to garner about 11.4% of the national operators' gross additions in the third quarter of 2003 versus 14.1% in the year-ago period.

Verizon Wireless has been able to post strong subscriber figures largely as a result of the popularity of its America's Choice pricing plans and the strong reputation of its national network. According to the company, about 47% of Verizon Wireless's total subscriber base is now on an America's Choice plan, up from approximately 15.2% at the end of the third quarter of 2002.

In Table 10, we show the year-over-year growth in gross subscriber additions. Cingular posted the strongest result this past quarter with a 44% growth rate. Sprint PCS posted its fifth consecutive quarter of negative year-over-year growth in gross subscriber additions. After five consecutive quarters of the highest year-over-year growth, T-Mobile posted negative growth in the third quarter of 2003. The strong growth of the prior four quarters was partially due to its launch in California and Nevada in third quarter 2002, which aided year-over-year comparisons. Beginning with third quarter 2003, year-over-year comparisons for T-Mobile's gross additions are more comparable.

It is interesting to note that Nextel is the only national operator to post positive year-over-year growth in gross subscriber additions over the entire measurement period, while Nextel Partners is the only affiliate to register a similar feat among its peer group. We believe their success is related to their ability to grow from existing corporate accounts as well as recent "wins" in the security and government sectors.

**Nextel is the only national operator to post positive growth in gross adds over the measurement period, while Nextel Partners is the only affiliate to register that feat among its peers**

The third quarter of 2003 represented the sixth quarter over the measurement period in which Triton PCS posted year-over-year declines in gross subscriber additions. Management attributed the weak gross adds in the third quarter of 2003 to unexpected bankruptcy of the company's largest indirect retailer, ZAP, as well as the termination of other, less cost-effective agents. Triton PCS said that collectively the loss of these agents represented the bulk of its gross additions shortfall compared with the year-earlier period. Taking a more long-term view, we believe Triton PCS's negative trend in gross subscriber additions can be partially explained by its continued focus on high-end/high-usage subscribers (with its "UnPlan" offerings). With U.S. wireless penetration rates over 50%, many of those people targeted in the "high-end" market already have wireless service. Therefore, Triton's focus on the high-end user makes it more reliant on capturing other providers' customers (i.e., "switchers").

As for the regional operators, Western Wireless had its fourth consecutive quarter of positive year-over-year increases in gross additions after four consecutive quarters of year-over-year declines. ALLTEL recorded its fourth consecutive quarter of double-digit percentage year-over-year increases in gross subscriber additions after a long string of negative or single-digit gains. However, the annual increase in gross additions can mostly be attributed to its acquisition of CenturyTel's wireless operations in the third quarter of 2002. On its earnings conference call, ALLTEL said that 42% of the gross additions for the quarter chose one of its higher value national plans.

In Table 11, we estimate the market shares of the gross additions in the markets that the operators' networks cover. For this analysis, we estimated the total industry gross additions (on a quarterly basis) using a combination of our company database and the CTIA industry subscriber data. We divided the gross addition figures by the population in the United States to arrive at an estimate of the gross additions per POP. Then, we multiplied the gross addition per POP figures by the number of covered POPs for each of the operators to approximate the total number of gross additions in the markets in which they operate.

To gauge the operators' approximate market shares, we divided each operator's gross additions by the estimated total gross additions in its market. We recognize that this analysis assumes the gross additions are evenly distributed across the United States; however, we believe that despite this simplified assumption, the market share trends of the operators will not be skewed materially. With gross addition growth slowing, market share will become an increasingly important variable in determining subscriber additions. Also, we believe market share shifts will be hard to project in the future and they will be highly dependent on promotions or new product offerings in the marketplace. This will cause operators to have less visibility on subscriber additions on a quarterly basis, in our view.

In terms of the effective market share of the national operators, Verizon Wireless, Cingular, and AT&T Wireless have historically led this category during the measurement period and the third quarter held true to form. From the third quarter

of 2002 until the first quarter of 2003, T-Mobile had the third-highest market share of gross additions in the markets it served. But, in the second quarter of 2003, the company fell to a distant fifth place. T-Mobile was able to make up one position by posting 15.6% in the third quarter of 2003, leaving it fourth among the national providers. The effects of local number portability (LNP) may shake up the market share positions somewhat; however, we expect Verizon Wireless to remain a very strong player.

Cingular continued to increase market share steadily over the past four quarters, posting a 23.0% share in the third quarter of 2003 versus 17.5% share in the third quarter of 2002. We believe Cingular's introduction of a more meaningful brand message—"Cingular Fits You Best"—to tie in with its more focused local market strategy has helped the company regain some momentum in the marketplace. At the beginning of 2003, Cingular reorganized its marketing, sales, and operations activities from a national to a regional basis to more effectively address local market needs.

Verizon Wireless has been steadily increasing its market share and posted its highest result during the measurement period of 27.4% in the third quarter of 2003. This is particularly impressive given the company largely operates in five to seven player markets. On the flip side, Sprint PCS continued to see its market share declines and the company posted its lowest market share results over the measurement period at 13.6% in the third quarter of 2003, versus 16.4% in the third quarter of 2002. The third quarter of 2003 represented the third consecutive quarter of decreasing market share for Sprint PCS.

We believe sales and distribution will be a key area of focus for Sprint PCS in 2004. In 2003, we believe PCS's primary objective was to clean up the quality of its subscriber base, and it was willing to forego market share during this transition.

Finally, the national operators as a whole picked up share in the third quarter, moving to 86.0% of total market share versus 85.2% in the second quarter of 2003 and 84.5% in the third quarter of 2002.

All of the affiliate operators lost market share in the third quarter of 2003. Total market share for the affiliates fell from 3.6% in the second quarter of 2003 to 3.0% in the third quarter of 2003. Nextel Partners market share fell from 7.6% in the second quarter of 2003 to 7.0% in the third quarter of 2003 while Triton PCS's share declined from 13.7% in the second quarter of 2003 to 11.8% in the third quarter of 2003. Given the varying levels of exposure to LNP in secondary markets, the affiliate space may not see a significant effect until LNP is implemented in all markets (which is scheduled to take place May 2004).

Regional operators also lost share during the third quarter of 2003, decreasing from 11.2% to 11.0%. Of the regional operators, U.S. Cellular had the largest sequential drop of approximately 380 basis points, from 16% to 12.2%. On its third quarter 2003 earnings conference call, management said that its subscriber

growth was negatively affected by its decision to not match “extreme levels of equipment discounting” in the marketplace. Management said that it not only didn’t match its competitors’ handset pricing, it decided to raise equipment pricing in hopes of “putting some value back into the phones.” U.S. Cellular indicated that competitors didn’t match its increased equipment pricing and, as a result, subscriber growth was negatively affected. Management indicated that it moved its equipment pricing down so that it was in line with its competitors for the fourth quarter.

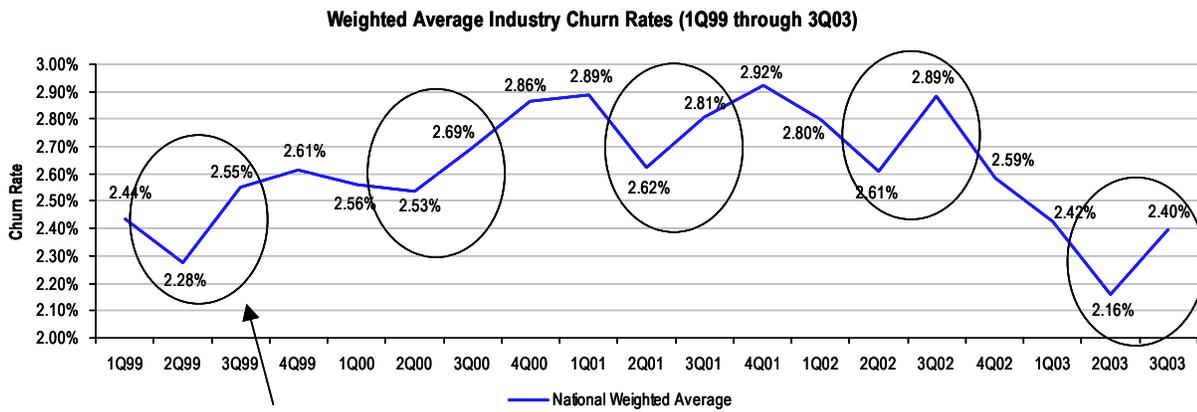
In Table 12, we show gross subscriber additions per 1,000 covered POPs. In the third quarter of 2003, Verizon Wireless had the highest number of gross additions per 1,000 covered POPs of any of the national operators at 14.39 (versus 12.99 in the second quarter of 2003 and 13.06 in the third quarter of 2002). The third quarter of 2003 also represented the sixth consecutive quarter in which Verizon Wireless has come in first among the national operators for this metric. Cingular Wireless posted its second consecutive quarter of double-digit results for this metric. Verizon Wireless and Cingular were the only two national carriers to post double-digit results for this metric. Sprint PCS posted its third consecutive quarter of falling gross subscriber additions per 1,000 covered POPs at 7.14.

Cingular Wireless posted the largest sequential improvement in gross subscriber additions per 1,000 covered POPs at a positive 1.8 (versus 1.49 sequential improvement from first quarter 2003 to second quarter 2003), while Sprint PCS had the only drop among the national operators with a (0.20) result. Finally, among the national operators, we highlight Nextel’s consistency in gross additions per 1,000 covered POPs. Over the entire measurement period, Nextel has ranged from 5.34 to 5.78.

In Table 13, we rank the operators according to their monthly churn rates (in ascending order, since lower churn is better). The monthly churn rate is calculated by taking the number of customers disconnecting (voluntarily and involuntarily) and dividing by the average subscribers, divided by three (for the number of months in the quarter). We calculated the total churn rate, which includes prepaid and post-paid disconnects. We estimated blended churn in some cases because some operators only provide postpaid churn figures.

The national operators’ weighted average churn rate increased to 2.4% in the third quarter from approximately 2.2% in the second quarter of 2003. However, this is the second lowest result over the measurement period, and the sequential increase can likely be attributed to the seasonal cycle of churn. As shown in the Chart 1, over the past few years churn levels have been at their lowest in the second quarter of each year. In third quarter 2002, in addition to the seasonal increase, Verizon Wireless (among others) experienced substantial disconnects in the reseller channel as a result of WorldCom’s exit from the wireless resale business.

**Chart 1: Weighted Average Industry Churn Rates**



Over the past few years, we have seen churn levels at their lowest in the second quarter and increasing in the third quarter.

Source: Company reports and UBS estimates

While certain operators saw sequential increases in their churn rates, as shown in Chart 1, the overall industry sequential increase was consistent with prior years. Also, the overall industry churn rate was lower than prior period third quarters, despite greater than expected sequential churn increases by certain operators (i.e., AT&T Wireless).

To highlight the overall improvement in churn, the third quarter of 2003 represented the second sequential quarter over the measurement period in which two national carriers had blended churn rates under 2% and all but one carrier had blended churn rates under 3.0%. By comparison, in the third quarter of 2002, there wasn't a single national carrier with a sub-2.0% churn rate and one carrier (T-Mobile) had an over-4.0% churn rate.

Nextel was the only national provider to post an improvement in churn in the third quarter versus the second. The consistency of Nextel and Nextel Partners' monthly churn rates has been extraordinary, in our view. During 2002, Nextel's churn rate has been between 2.0-2.1%. During the first three quarters of 2003, Nextel posted churn rates of 1.9%, 1.6%, and 1.4%, respectively.

Nextel Partners improved its already low monthly churn rate to 1.5% for the third quarter 2003 (versus 1.6% for most of the measurement period, excluding the first quarter 2003 results of 1.7%). We believe these impressive results are a tribute to its differentiated service offerings. In effect, Nextel provides a service that, for most of Nextel's customer base, no other operator can effectively offer.

Nextel attributes its solid churn results to its ongoing focus on customer retention (i.e., its "Touch Point" strategy). Nextel said it has implemented customer retention initiatives to proactively identify and address its customers' needs at various touch points with the customer over the customer life cycle.

These initiatives include such programs as strategic care provided to customers with certain calling attributes and efforts to migrate customers to more optimal service pricing plans. Also, Nextel said it believes its customer churn reflects its focus on acquiring high quality subscribers, including add-on subscribers from existing customer accounts, and the attractiveness of its differentiated products and services. These efforts, and consequently better churn results, could also be attributed to the heightened awareness on customer retention due to local number portability.

AT&T Wireless saw the largest sequential increase in churn, from 2.2% in second quarter 2003 to 2.7% in third quarter 2003. We believe there were a number of reasons for the negative move. First, due to seasonality, the company noted that more contacts come up for renewal in the second half of the year than the first half. On its most recent earnings call, AT&T Wireless said that 25% more contracts came up for renewal in the third quarter of 2003 than in the second quarter of 2003. (Moreover, management said that more contracts come up for renewal in fourth quarter 2003 than in third quarter 2003.)

Next, AT&T Wireless said that it was undertaking an initiative to get heavy TDMA roamers onto its new GSM platform since its GSM roaming rates are significantly less than its comparable TDMA roaming rates. Management conceded that some subscribers took this opportunity to leave AT&T Wireless.

Sprint PCS saw its third quarter 2003 churn increase to 2.7% from 2.4% in the second quarter of 2003. Management believes its voluntary churn was negatively affected by the company's price position as well as a slight increase in contract expirations. Regarding price positioning, management indicated that it was slow to react to competitive conditions in the marketplace, particularly in the mid-price plans. While Sprint PCS believes it is holding or gaining share in the high end and Virgin Mobile is performing well in the youth and prepaid segments, management believes it missed opportunities in the mid-price range. As such, Sprint PCS rolled out new mid-range price plans in mid-October 2003.

Excluding Nextel Partners, the affiliate operators saw sequential churn increases of 36-53 basis points (Nextel Partners saw a 10 basis point decline). AirGate PCS had the largest increase, from 3.1% in the second quarter of 2003 to 3.6% in the third quarter of 2003. However, this is down on a year-over-year basis from 4.6% in the third quarter of 2002.

Triton PCS's third quarter churn increased to 2.46% from 2.07% in the second quarter of 2003. The company said the voluntary component of churn ticked up sequentially from second quarter 2003 due to the impact of price increases that were implemented in early 2003. In March 2003, TPC began charging \$1.85 per subscriber per month to recover regulatory fees as well as started billing all customers \$0.75 per month for E-911. Triton saw a seasonally higher number of contract anniversaries during the quarter, which also contributed to the higher churn rate.

Among the regional operators, Centennial's PCS business posted the best sequential improvement in churn (0.9%), while Rural Cellular posted the largest increase (0.5%). ALLTEL also posted a sequential increase in churn at 0.3%. According to ALLTEL's third quarter 10-Q filing, blended churn increased primarily due to the company's decision to phase-out offering unlimited pay-in-advance service in 11 markets. ALLTEL said that customers subscribing to these plans represent less than 1% of the company's total wireless customer base.

In Table 14, we ranked the actual disconnects, as calculated from the monthly churn rates. As shown, the first quarter of 2003 represented the first quarter over the measurement period in which disconnects were down on a year-over-year basis. This trend continued through the third quarter of 2003.

To appreciate the sheer size of Verizon Wireless, note that the company had more disconnects in the third quarter (1.960 million) than three other national operators had gross subscriber additions. But, despite its larger subscriber base, it's interesting to note that Verizon Wireless had roughly 200,490 fewer disconnects than in the year-ago period. Sprint PCS showed the strongest year-over-year improvement in disconnects with a decrease of 442,000 (from 1,678,000 in third quarter 2002 to 1,236,000 in third quarter 2003). T-Mobile saw the greatest increase in disconnects year-over-year, increasing by almost 100,000 from 1,066,338 in third quarter 2002 to 1,166,022 in third quarter 2003.

Net additions, calculated by subtracting the disconnects from gross additions, are ranked in Table 15. This table shows only the internal net additions and excludes any subscriber additions gained through acquisitions. As shown in Table 15, we estimate that the net additions for the companies we track were approximately 4.2 million in the third quarter of 2003, a 64% increase from the third quarter of 2002. This is the second consecutive quarter of positive growth. The third quarter of 2002 represented the lowest net addition figure for the measurement period at 2.5 million net additions.

In the third quarter 2003, total net additions for the national operators were about 3.9 million, up from 3.8 million second quarter of 2003 and 2.2 million in the third quarter of 2002. This was the highest posting since the fourth quarter of 2001. Among the national operators, Cingular posted the largest absolute increase in sequential as well as year-over-year net additions (increasing 205,000 over second quarter 2003 and 852,000 over third quarter 2002). The largest sequential decrease came from AT&T Wireless (217,000 decline over second quarter 2003). T-Mobile saw the largest year-over-year decline at 202,000 from third quarter 2002 to third quarter 2003.

For the affiliates, Nextel Partners was the only operator to post an increase over the second quarter of 2003. However, the company saw a decline of 2,000 on a year-over-year basis. Among the regional player, the largest sequential increase came from Leap Wireless, which also had the largest year-over-year decrease.

In Table 16, we detail the year-over-year growth rates in net additions for the service providers. The third quarter of 2003 marked the third consecutive quarter in which the national operators posted more net additions than in the year-ago period. And, the third quarter 2003 gain for the national operators was an impressive 78.8%. The affiliate and regional operators continued to post negative year-over-year growth in net additions. Verizon Wireless and Nextel were the primary contributors to the increased growth in net additions (posting 75.2% and 34.6% year-over-year growth, respectively).

**The net additions for the national operators were up about 78.8% in the 3Q03 versus 3Q02**

Table 9: Gross Additions

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Verizon Wireless	3,067,240	2,391,756	2,789,240	2,963,889	2,980,378	2,880,428	3,027,547	3,367,399
Cingular	2,318,688	2,134,000	2,150,000	1,861,000	1,661,041	1,896,000	2,217,000	2,679,000
AT&T Wireless	2,359,155	2,115,737	1,838,604	1,945,655	2,181,468	1,705,138	1,852,097	2,000,000
T-Mobile	1,601,953	1,462,107	1,417,392	1,938,338	2,004,788	1,857,998	1,595,232	1,836,022
Sprint PCS	2,283,820	1,977,575	1,568,627	1,600,000	1,785,000	1,570,000	1,460,000	1,420,000
Nextel	1,056,359	1,063,765	1,063,313	1,072,572	1,155,938	1,098,570	1,137,605	1,150,256
<b>National Gross Adds</b>	<b>12,687,215</b>	<b>11,144,940</b>	<b>10,827,177</b>	<b>11,381,453</b>	<b>11,768,612</b>	<b>11,008,133</b>	<b>11,289,480</b>	<b>12,452,677</b>
<b>Affiliate Operators</b>								
Nextel Partners	104,503	111,984	121,844	128,620	132,863	133,771	137,240	140,420
Alamosa PCS	143,500	102,038	77,913	92,404	97,645	92,717	78,623	80,975
Triton PCS	106,562	73,212	89,142	85,494	93,452	85,300	73,150	68,639
US Unwired	112,653	102,406	85,137	85,643	95,249	93,104	66,200	68,635
UbiquiTel	66,117	47,288	41,561	49,019	50,607	44,300	42,000	43,600
AirGate PCS	82,376	68,404	47,529	48,276	55,621	43,003	38,919	34,464
Horizon PCS	62,968	50,373	34,374	34,705	55,922	51,290	39,531	NAV
TeleCorp	209,263	NAV						
<b>Affiliate Gross Adds</b>	<b>887,941</b>	<b>555,705</b>	<b>497,501</b>	<b>524,160</b>	<b>581,359</b>	<b>543,485</b>	<b>475,663</b>	<b>436,733</b>
<b>Regional Operators</b>								
Alltel	569,972	568,836	558,887	601,227	675,230	657,124	655,682	699,675
US Cellular	271,880	255,112	238,184	335,668	414,656	376,027	319,000	294,000
Leap Wireless (Cricket)	473,372	391,417	258,146	246,197	193,899	184,899	153,000	215,000
Western Wireless	99,523	74,104	89,493	98,603	100,039	90,717	103,203	110,183
Qwest	189,342	171,940	140,207	108,965	92,965	107,256	93,616	92,352
Centennial PCS	46,033	75,496	57,556	56,478	53,442	60,460	51,612	58,490
Rural Cellular	56,000	48,415	48,548	48,037	53,600	46,559	43,664	45,954
Centennial Cellular	46,369	55,817	34,236	32,375	31,215	48,888	37,633	45,598
Cincinnati Bell	63,204	37,577	40,726	32,569	44,979	39,732	33,467	36,878
Century Telephone	74,746	NAV						
<b>Regional Gross Adds</b>	<b>1,890,440</b>	<b>1,678,714</b>	<b>1,465,982</b>	<b>1,560,117</b>	<b>1,660,024</b>	<b>1,611,661</b>	<b>1,490,877</b>	<b>1,598,130</b>
<b>Total Gross Additions</b>	<b>15,465,595</b>	<b>13,379,359</b>	<b>12,790,659</b>	<b>13,465,730</b>	<b>14,009,995</b>	<b>13,163,280</b>	<b>13,256,020</b>	<b>14,487,540</b>
<b>Y-over-Y Growth in Gross Additions</b>	<b>8.0%</b>	<b>0.0%</b>	<b>-2.2%</b>	<b>-3.9%</b>	<b>-9.4%</b>	<b>-1.6%</b>	<b>3.6%</b>	<b>7.9%</b>
<b>UBS Estimated Industry Gross Adds</b>	<b>15,991,265</b>	<b>13,876,647</b>	<b>13,339,619</b>	<b>14,058,668</b>	<b>14,618,463</b>	<b>13,820,615</b>	<b>13,909,016</b>	<b>15,165,015</b>
<b>Y-over-Y Growth in Gross Additions</b>	<b>5.2%</b>	<b>-2.8%</b>	<b>-4.3%</b>	<b>-3.9%</b>	<b>-8.6%</b>	<b>-0.4%</b>	<b>4.3%</b>	<b>7.9%</b>

Note: Year-over-year comparison calculations are based on current data. Therefore, the historical data comparisons have been adjusted to account for fewer data points in the present data.

Source: Company reports and UBS estimates

Table 10: Year-Over-Year Growth in Gross Additions (Percentage)

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Cingular	-5.8%	-13.4%	-7.7%	-10.1%	-28.4%	-11.2%	3.1%	44.0%
Verizon Wireless	-8.3%	-14.6%	3.3%	13.1%	-2.8%	20.4%	8.5%	13.6%
Nextel	11.8%	2.2%	5.9%	9.4%	9.4%	3.3%	7.0%	7.2%
AT&T Wireless	17.1%	6.9%	-11.6%	-16.1%	-7.5%	-19.4%	0.7%	2.8%
T-Mobile	25.5%	9.2%	12.3%	47.8%	25.1%	27.1%	12.5%	-5.3%
Sprint PCS	16.5%	23.4%	0.9%	-26.1%	-21.8%	-20.6%	-6.9%	-11.3%
<b>National Gross Addition Growth</b>	5.7%	-0.7%	-0.9%	-0.7%	-7.2%	-1.2%	4.3%	9.4%
<b>Affiliate Operators</b>								
Nextel Partners	61.7%	51.7%	42.6%	36.4%	27.1%	19.5%	12.6%	9.2%
UbiquiTel	831.2%	570.8%	85.4%	5.4%	-23.5%	-6.3%	1.1%	-11.1%
Alamosa PCS	180.0%	90.5%	-2.0%	-25.5%	-32.0%	-9.1%	0.9%	-12.4%
Triton PCS	0.2%	-11.8%	-0.1%	-6.7%	-12.3%	16.5%	-17.9%	-19.7%
US Unwired	71.3%	38.6%	35.0%	-5.3%	-15.4%	-9.1%	-22.2%	-19.9%
AirGate PCS	53.8%	35.5%	-7.4%	-37.2%	-32.5%	-37.1%	-18.1%	-28.6%
Horizon PCS	87.8%	114.6%	24.9%	-28.1%	-11.2%	1.8%	15.0%	NAV
TeleCorp	8.8%	NAV						
<b>Affiliate Gross Addition Growth</b>	54.5%	52.1%	18.9%	-8.4%	-14.3%	-2.2%	-4.4%	-10.8%
<b>Regional Operators</b>								
Centennial Cellular	-8.2%	-18.9%	-31.3%	-23.7%	-32.7%	-12.4%	9.9%	40.8%
Alltel	-5.4%	-2.1%	2.4%	0.0%	18.5%	15.5%	17.3%	16.4%
Cincinnati Bell	-25.5%	-43.7%	-38.9%	-43.3%	-28.8%	5.7%	-17.8%	13.2%
Western Wireless	-23.1%	-36.7%	-23.2%	-21.3%	0.5%	22.4%	15.3%	11.7%
Centennial PCS	22.8%	48.9%	-13.7%	-18.0%	16.1%	-19.9%	-10.3%	3.6%
Rural Cellular	9.8%	-16.5%	-11.7%	-22.5%	-4.3%	-3.8%	-10.1%	-4.3%
US Cellular	-21.6%	-12.0%	0.4%	13.4%	52.5%	47.4%	33.9%	-12.4%
Leap Wireless (Cricket)	234.2%	138.8%	43.5%	-18.3%	-59.0%	-52.8%	-40.7%	-12.7%
Qwest	-8.1%	-25.7%	-46.1%	-52.1%	-50.9%	-37.6%	-33.2%	-15.2%
Century Telephone	-19.0%	NAV						
<b>Regional Gross Addition Growth</b>	8.5%	3.1%	-7.1%	-12.4%	-12.2%	-4.0%	1.7%	2.4%
<b>Total Gross Addition Growth</b>	8.0%	0.0%	-2.2%	-3.9%	-9.4%	-1.6%	3.6%	7.9%

Note: Year-over-year comparison calculations are based on current data. Therefore, the historical data comparisons have been adjusted to account for fewer data points in the present data.

Source: Company reports and UBS estimates

Table 11: Effective Market Share

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Verizon Wireless	24.6%	22.0%	26.7%	26.5%	25.6%	25.7%	26.9%	27.4%
Cingular	21.8%	23.1%	24.3%	17.5%	15.1%	18.2%	21.2%	23.0%
AT&T Wireless	24.9%	21.6%	19.5%	19.3%	20.1%	16.6%	17.5%	17.0%
T-Mobile	18.6%	18.5%	18.7%	18.7%	18.0%	17.2%	14.7%	15.6%
Sprint PCS	21.2%	21.1%	17.5%	16.4%	17.7%	16.5%	15.2%	13.6%
Nextel	9.5%	11.0%	11.4%	10.9%	11.3%	11.2%	11.6%	10.8%
<b>National Weighted Average Market Share</b>	20.1%	19.6%	19.8%	18.4%	18.1%	17.8%	18.1%	18.1%
<b>National Market Share</b>	82.0%	83.3%	84.6%	84.5%	84.0%	83.6%	85.2%	86.0%
<b>Affiliate Operators</b>								
Alamosa PCS	22.7%	18.2%	14.5%	16.3%	16.2%	16.3%	13.7%	12.9%
Triton PCS	17.4%	13.8%	17.6%	15.8%	16.6%	16.0%	13.7%	11.8%
AirGate PCS	24.3%	23.4%	16.9%	16.6%	18.5%	15.1%	13.4%	10.7%
UbiquiTel	16.5%	13.5%	12.0%	13.1%	12.7%	11.8%	11.1%	10.6%
US Unwired	18.5%	17.3%	14.5%	13.8%	14.8%	15.2%	10.8%	10.2%
Nextel Partners	5.6%	6.6%	7.3%	7.3%	7.2%	7.6%	7.6%	7.0%
Horizon PCS	16.2%	14.3%	9.9%	9.5%	14.8%	14.4%	11.1%	NAV
TeleCorp	11.1%	NAV						
<b>Affiliate Weighted Average Market Share</b>	14.0%	12.7%	11.7%	11.6%	12.3%	12.1%	10.4%	9.5%
<b>Affiliate Market Share</b>	5.7%	4.2%	3.9%	3.9%	4.1%	4.1%	3.6%	3.0%
<b>Regional Operators</b>								
Cincinnati Bell	44.8%	30.5%	34.1%	25.7%	33.9%	31.4%	26.1%	26.5%
Alltel	20.4%	22.8%	23.4%	20.6%	22.4%	22.7%	22.5%	22.0%
Western Wireless	17.2%	14.5%	18.2%	18.9%	18.5%	17.8%	20.2%	20.2%
Leap Wireless (Cricket)	34.6%	31.6%	21.7%	19.7%	15.0%	15.1%	12.4%	16.1%
Rural Cellular	16.8%	16.8%	17.6%	16.6%	17.8%	16.4%	15.2%	14.7%
Centennial Cellular	13.7%	19.0%	12.2%	10.9%	10.2%	16.9%	12.7%	14.2%
US Cellular	15.7%	16.6%	16.7%	16.6%	19.8%	18.9%	16.0%	12.2%
Centennial PCS	6.5%	12.4%	9.5%	12.3%	11.2%	13.5%	11.4%	11.8%
Qwest	17.2%	16.3%	13.6%	10.1%	8.2%	9.9%	8.7%	7.8%
Century Telephone	15.7%	NAV						
<b>Regional Weighted Average Market Share</b>	19.1%	19.8%	17.9%	16.8%	17.3%	17.6%	16.1%	16.0%
<b>Regional Market Share</b>	12.2%	12.5%	11.5%	11.6%	11.8%	12.2%	11.2%	11.0%

Source: Company reports and UBS estimates

Table 12: Gross Adds per 1,000 Covered POPs

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Verizon Wireless	13.88	10.73	12.51	13.06	13.07	12.36	12.99	14.39
Cingular	12.27	11.29	11.38	8.62	7.69	8.78	10.26	12.07
AT&T Wireless	14.07	10.53	9.15	9.49	10.24	8.01	8.46	8.93
T-Mobile	10.52	9.03	8.75	9.19	9.20	8.29	7.12	8.20
Sprint PCS	11.96	10.30	8.17	8.08	9.02	7.93	7.34	7.14
Nextel	5.36	5.37	5.34	5.36	5.78	5.41	5.60	5.67
<b>National Weighted Average</b>	11.35	9.57	9.29	9.05	9.25	8.55	8.72	9.53
<b>Affiliate Operators</b>								
Alamosa PCS	12.81	8.87	6.78	8.04	8.28	7.86	6.61	6.80
Triton PCS	9.82	6.75	8.22	7.77	8.50	7.70	6.60	6.20
AirGate PCS	13.73	11.40	7.92	8.18	9.43	7.29	6.49	5.65
UbiquiTel	9.31	6.57	5.63	6.45	6.49	5.68	5.38	5.59
US Unwired	10.43	8.46	6.81	6.80	7.56	7.33	5.21	5.36
Nextel Partners	3.16	3.25	3.43	3.57	3.66	3.65	3.67	3.70
Horizon PCS	9.13	7.00	4.65	4.69	7.56	6.93	5.34	NAV
TeleCorp	6.28	NAV						
<b>Affiliate Weighted Average</b>	7.45	6.22	5.46	5.70	6.26	5.83	5.05	4.98
<b>Regional Operators</b>								
Cincinnati Bell	25.28	14.88	15.97	12.65	17.30	15.14	12.63	13.92
Alltel	11.51	11.13	10.94	10.12	11.44	10.95	10.90	11.59
Western Wireless	9.72	7.07	8.53	9.32	9.45	8.57	9.75	10.62
Leap Wireless (Cricket)	19.50	15.41	10.16	9.69	7.63	7.25	6.00	8.46
US Cellular	10.59	9.26	8.65	9.18	11.34	10.23	8.49	8.15
Rural Cellular	9.50	8.22	8.24	8.15	9.10	7.90	7.32	7.71
Centennial Cellular	7.71	9.28	5.69	5.38	5.19	8.12	6.15	7.45
Centennial PCS	3.69	6.05	4.46	6.06	5.73	6.48	5.50	6.22
Qwest	9.72	7.95	6.39	4.98	4.19	4.76	4.19	4.11
Century Telephone	8.86	NAV						
<b>Regional Weighted Average</b>	10.75	9.66	8.40	8.28	8.82	8.48	7.79	8.42
<b>Industry Weighted Average</b>								
<b>Industry Weighted Average</b>	10.94	9.37	8.93	8.76	9.02	8.38	8.39	9.15

Source: Company reports and UBS estimates

Table 13: Monthly Churn

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Nextel	2.2%	2.1%	2.1%	2.0%	2.1%	1.9%	1.6%	1.4%
Verizon Wireless	2.7%	2.6%	2.3%	2.3%	2.1%	2.1%	1.7%	1.9%
AT&T Wireless	2.7%	2.6%	2.4%	2.9%	2.4%	2.3%	2.2%	2.7%
Sprint PCS	3.0%	3.0%	2.9%	3.8%	3.5%	3.1%	2.4%	2.7%
Cingular	3.1%	2.9%	2.7%	3.0%	2.7%	2.6%	2.5%	2.8%
T-Mobile	4.7%	4.4%	4.1%	4.2%	3.5%	3.0%	3.0%	3.3%
<b>National Weighted Average</b>	2.9%	2.8%	2.6%	2.9%	2.6%	2.4%	2.2%	2.4%
<b>Affiliate Operators</b>								
Nextel Partners	1.6%	1.6%	1.6%	1.6%	1.6%	1.7%	1.6%	1.5%
Triton PCS	2.0%	1.9%	2.0%	2.2%	2.5%	2.1%	2.1%	2.5%
Alamosa PCS	3.3%	3.4%	3.5%	4.2%	3.7%	3.3%	2.7%	3.2%
UbiquiTel	4.0%	4.2%	4.1%	4.8%	3.8%	3.4%	2.9%	3.4%
AirGate PCS	3.5%	3.5%	3.5%	4.6%	4.0%	3.5%	3.1%	3.6%
US Unwired	3.6%	4.1%	4.1%	5.2%	4.6%	4.1%	3.2%	3.6%
Horizon PCS	3.0%	3.2%	3.2%	3.9%	3.5%	2.9%	2.7%	NAV
TeleCorp	3.7%	NAV						
<b>Affiliate Weighted Average</b>	3.0%	2.9%	2.9%	3.4%	3.1%	2.8%	2.4%	2.7%
<b>Regional Operators</b>								
US Cellular	1.9%	2.1%	1.8%	2.3%	2.1%	1.9%	1.7%	1.8%
Rural Cellular	2.4%	2.1%	1.7%	2.4%	2.1%	2.1%	1.8%	2.3%
Centennial Cellular	2.3%	2.2%	1.8%	2.4%	2.2%	2.5%	2.2%	2.3%
Western Wireless	2.3%	2.6%	2.4%	2.5%	2.2%	2.0%	2.4%	2.4%
Alltel	2.4%	2.4%	2.3%	2.4%	2.7%	2.7%	2.4%	2.7%
Centennial PCS	3.7%	4.1%	3.6%	4.0%	3.4%	3.2%	3.7%	2.8%
Cincinnati Bell	2.8%	2.5%	2.5%	2.7%	2.9%	2.8%	2.8%	2.9%
Leap Wireless (Cricket)	2.9%	3.2%	4.6%	4.5%	4.0%	4.0%	4.6%	4.5%
Qwest	4.4%	5.2%	4.1%	4.3%	4.5%	4.7%	4.7%	4.8%
Century Telephone	3.0%	NAV						
<b>Regional Weighted Average</b>	2.5%	2.5%	2.4%	2.7%	2.7%	2.6%	2.6%	2.7%
<b>Industry Weighted Average</b>	2.9%	2.8%	2.6%	2.9%	2.6%	2.5%	2.2%	2.4%

Note: Year-over-year comparison calculations are based on current data. Therefore, the historical data comparisons have been adjusted to account for fewer data points in the present data.

Source: Company reports and UBS estimates

Table 14: Disconnects

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Nextel	555,459	561,765	592,313	592,572	652,938	618,570	546,605	504,256
T-Mobile	934,553	953,607	964,692	1,066,338	987,788	936,998	989,232	1,166,022
Sprint PCS	1,169,820	1,252,575	1,260,627	1,678,000	1,535,000	1,371,000	1,100,000	1,236,000
AT&T Wireless	1,432,155	1,465,737	1,421,604	1,744,655	1,476,468	1,448,138	1,406,097	1,771,000
Cingular	1,993,688	1,900,000	1,797,000	1,968,000	1,782,041	1,707,000	1,677,000	1,934,000
Verizon Wireless	2,352,240	2,273,756	2,066,240	2,160,889	2,016,378	2,053,428	1,732,547	1,960,399
<b>National Disconnects</b>	<b>8,437,915</b>	<b>8,407,440</b>	<b>8,102,477</b>	<b>9,210,453</b>	<b>8,450,612</b>	<b>8,135,133</b>	<b>7,451,480</b>	<b>8,571,677</b>
<b>Year over Year Change (%)</b>	<b>25.6%</b>	<b>14.9%</b>	<b>16.2%</b>	<b>18.5%</b>	<b>0.2%</b>	<b>-3.2%</b>	<b>-8.0%</b>	<b>-6.9%</b>
<b>Affiliate Operators</b>								
UbiquiTel	18,817	24,188	25,861	32,219	28,207	27,100	24,400	30,400
AirGate PCS	27,556	32,349	36,125	46,440	41,951	37,248	33,326	39,161
Nextel Partners	22,803	26,784	31,344	35,520	39,763	46,971	48,240	49,320
Alamosa PCS	44,500	54,038	57,913	72,404	66,645	61,717	54,623	64,975
Triton PCS	38,713	39,667	44,815	52,533	59,779	53,805	54,119	65,072
US Unwired	42,187	56,298	65,580	83,416	75,368	70,076	57,322	65,979
Horizon PCS	15,474	21,808	21,974	27,905	26,922	27,290	24,431	NAV
TeleCorp	107,322	NAV	NAV	NAV	NAV	NAV	NAV	NAV
<b>Affiliate Disconnects</b>	<b>317,371</b>	<b>255,132</b>	<b>283,613</b>	<b>350,436</b>	<b>338,635</b>	<b>324,207</b>	<b>296,461</b>	<b>314,907</b>
<b>Year over Year Change (%)</b>	<b>174.9%</b>	<b>184.8%</b>	<b>138.8%</b>	<b>122.3%</b>	<b>61.2%</b>	<b>27.1%</b>	<b>4.5%</b>	<b>-2.4%</b>
<b>Regional Operators</b>								
Centennial PCS	34,033	40,596	38,556	42,978	36,542	36,360	43,812	34,490
Centennial Cellular	35,069	34,617	29,036	38,675	35,115	40,088	35,633	37,598
Cincinnati Bell	38,104	35,177	34,426	38,069	40,279	39,431	39,368	39,978
Rural Cellular	41,665	32,162	27,786	47,288	34,024	40,226	33,355	44,485
Western Wireless	80,523	91,104	83,693	87,803	78,339	72,417	88,103	89,183
Qwest	144,342	173,940	137,207	141,965	142,965	143,256	137,616	134,352
Leap Wireless (Cricket)	78,724	122,698	194,383	201,052	178,512	183,542	206,770	196,707
US Cellular	189,880	224,112	195,184	259,668	254,656	239,027	216,000	228,000
Alltel	474,930	488,586	478,690	533,579	623,622	608,793	574,684	650,013
Century Telephone	72,070	NAV	NAV	NAV	NAV	NAV	NAV	NAV
<b>Regional Disconnects</b>	<b>1,189,339</b>	<b>1,242,992</b>	<b>1,218,960</b>	<b>1,391,075</b>	<b>1,424,053</b>	<b>1,403,139</b>	<b>1,375,341</b>	<b>1,454,806</b>
<b>Year over Year Change (%)</b>	<b>17.9%</b>	<b>24.5%</b>	<b>18.0%</b>	<b>22.1%</b>	<b>19.7%</b>	<b>12.9%</b>	<b>12.8%</b>	<b>4.6%</b>
<b>Total Disconnects</b>								
<b>Total Disconnects</b>	<b>9,944,624</b>	<b>9,905,564</b>	<b>9,605,049</b>	<b>10,951,964</b>	<b>10,213,300</b>	<b>9,862,480</b>	<b>9,123,282</b>	<b>10,341,390</b>
<b>Year over Year Change (%)</b>	<b>26.8%</b>	<b>15.9%</b>	<b>16.2%</b>	<b>18.6%</b>	<b>2.7%</b>	<b>-0.4%</b>	<b>-5.0%</b>	<b>-5.3%</b>

Note: Year-over-year comparison calculations are based on current data. Therefore, the historical data comparisons have been adjusted to account for fewer data points in the present data.

Source: Company reports and UBS estimates

Table 15: Net Additions (excluding acquisitions)

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Verizon Wireless	715,000	118,000	723,000	803,000	964,000	827,000	1,295,000	1,407,000
Cingular	325,000	234,000	353,000	(107,000)	(121,000)	189,000	540,000	745,000
T-Mobile	667,400	508,500	452,700	872,000	1,017,000	921,000	606,000	670,000
Nextel	500,900	502,000	471,000	480,000	503,000	480,000	591,000	646,000
AT&T Wireless	927,000	650,000	417,000	201,000	705,000	257,000	446,000	229,000
Sprint PCS	1,114,000	725,000	308,000	(78,000)	250,000	199,000	360,000	184,000
<b>National Net Adds</b>	<b>4,249,300</b>	<b>2,737,500</b>	<b>2,724,700</b>	<b>2,171,000</b>	<b>3,318,000</b>	<b>2,873,000</b>	<b>3,838,000</b>	<b>3,881,000</b>
<b>Affiliate Operators</b>								
Nextel Partners	81,700	85,200	90,500	93,100	93,100	86,800	89,000	91,100
Alamosa PCS	99,000	48,000	20,000	20,000	31,000	31,000	24,000	16,000
UbiquiTel	47,300	23,100	15,700	16,800	22,400	17,200	17,600	13,200
Triton PCS	67,849	33,545	44,327	32,961	33,673	31,495	19,031	3,567
US Unwired	70,466	46,108	19,557	2,227	19,881	23,028	8,878	2,656
AirGate PCS	54,820	36,055	11,404	1,836	13,670	5,755	5,593	(4,697)
Horizon PCS	47,494	28,565	12,400	6,800	29,000	24,000	15,100	NAV
TeleCorp	101,941	NAV						
<b>Affiliate Net Adds</b>	<b>570,570</b>	<b>300,573</b>	<b>213,888</b>	<b>173,724</b>	<b>242,724</b>	<b>219,278</b>	<b>179,202</b>	<b>121,826</b>
<b>Regional Operators</b>								
US Cellular	82,000	31,000	43,000	76,000	160,000	137,000	103,000	66,000
Alltel	95,042	80,250	80,197	67,648	51,608	48,331	80,998	49,662
Centennial PCS	12,000	34,900	19,000	13,500	16,900	24,100	7,800	24,000
Western Wireless	19,000	(17,000)	5,800	10,800	21,700	18,300	15,100	21,000
Leap Wireless (Cricket)	394,648	268,719	63,763	45,145	15,387	1,357	(53,770)	18,293
Dobson Communications	54,800	22,600	35,800	29,900	36,000	12,000	18,400	14,400
Centennial Cellular	11,300	21,200	5,200	(6,300)	(3,900)	8,800	2,000	8,000
Rural Cellular	14,335	16,253	20,762	749	19,576	6,333	10,309	1,469
Cincinnati Bell	25,100	2,400	6,300	(5,500)	4,700	301	(5,901)	(3,100)
Qwest	45,000	(2,000)	3,000	(33,000)	(50,000)	(36,000)	(44,000)	(42,000)
Century Telephone	2,676	(8,340)	(5,742)	NAV	NAV	NAV	NAV	NAV
<b>Regional Net Adds</b>	<b>755,901</b>	<b>449,982</b>	<b>277,080</b>	<b>198,942</b>	<b>271,971</b>	<b>220,522</b>	<b>133,936</b>	<b>157,724</b>
<b>Total Net Additions</b>	<b>5,575,771</b>	<b>3,488,055</b>	<b>3,215,668</b>	<b>2,543,666</b>	<b>3,832,695</b>	<b>3,312,800</b>	<b>4,151,138</b>	<b>4,160,550</b>
<b>Y-over-Y Growth in Net Adds</b>	<b>-14.9%</b>	<b>-28.6%</b>	<b>-33.8%</b>	<b>-47.0%</b>	<b>-30.0%</b>	<b>-5.0%</b>	<b>29.1%</b>	<b>64.0%</b>
<b>Six Month Net Additions (Survey)</b>	<b>10,484,975</b>		<b>6,703,723</b>		<b>6,376,361</b>		<b>7,463,938</b>	
<b>Six Month Net Additions (CTIA)</b>	<b>9,976,778</b>		<b>6,186,858</b>		<b>6,205,472</b>		<b>7,298,982</b>	
<b>% of CTIA captured by survey</b>	<b>105.1%</b>		<b>108.4%</b>		<b>102.8%</b>		<b>102.3%</b>	

Note: Year-over-year comparison calculations are based on current data. Therefore, the historical data comparisons have been adjusted to account for fewer data points in the present data.

Source: Company reports, CTIA, and UBS estimates

**Table 16: Year-Over-Year Growth in Net Adds (percentage)**

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Verizon Wireless	-41.6%	-77.2%	-10.5%	6.8%	34.8%	600.8%	79.1%	75.2%
Nextel	-3.9%	-3.5%	-3.1%	-0.2%	0.4%	-4.4%	25.5%	34.6%
AT&T Wireless	7.2%	11.1%	-37.6%	-73.1%	-23.9%	-60.5%	7.0%	13.9%
T-Mobile	0.6%	-14.2%	0.9%	134.0%	52.4%	81.1%	33.9%	-23.2%
Cingular	-60.1%	-73.0%	-49.6%	-212.6%	-137.2%	-19.2%	53.0%	NM
Sprint PCS	-6.9%	-12.2%	-63.5%	-106.3%	-77.6%	-72.6%	16.9%	NM
<b>National Growth in Net Additions</b>	-19.6%	-30.0%	-31.1%	-41.2%	-21.9%	4.9%	40.9%	78.8%
<b>Affiliate Operators</b>								
US Unwired	40.8%	-18.2%	-50.4%	-96.2%	-71.8%	-50.1%	-54.6%	19.3%
Nextel Partners	48.5%	38.3%	29.5%	23.6%	14.0%	1.9%	-1.7%	-2.1%
Alamosa PCS	138.6%	24.6%	-63.4%	-77.3%	-68.7%	-35.4%	20.0%	-20.0%
UbiquiTel	775.1%	336.5%	-20.0%	-57.6%	-52.6%	-25.5%	12.1%	-21.4%
Triton PCS	-20.0%	-39.7%	-24.4%	-42.3%	-50.4%	-6.1%	-57.1%	-89.2%
AirGate PCS	17.3%	-10.1%	-68.2%	-96.7%	-75.1%	-84.0%	-51.0%	-355.8%
Horizon PCS	56.0%	56.7%	-42.6%	-83.2%	-38.9%	-16.0%	21.8%	NAV
TeleCorp	-29.8%	NAV	NAV	NAV	NAV	NAV	NAV	NAV
<b>Affiliate Growth in Net Additions</b>	24.3%	9.0%	-28.6%	-58.1%	-48.2%	-27.0%	-16.2%	-27.0%
<b>Regional Operators</b>								
Rural Cellular	-49.0%	-39.8%	1.5%	-91.8%	36.6%	-61.0%	-50.3%	96.1%
Western Wireless	-64.8%	-145.9%	-80.7%	-73.7%	14.2%	NM	160.3%	94.4%
Centennial PCS	-4.0%	57.2%	-38.9%	-64.1%	40.8%	-30.9%	-58.9%	77.8%
US Cellular	-52.0%	-72.8%	-41.1%	-10.6%	95.1%	341.9%	139.5%	-13.2%
Alltel	-33.3%	-26.2%	-29.2%	-45.6%	-45.7%	-39.8%	1.0%	-26.6%
Dobson Communications	-28.6%	-56.0%	-29.5%	-42.6%	-34.3%	-46.9%	-48.6%	-51.8%
Leap Wireless (Cricket)	203.3%	83.3%	-52.0%	-82.1%	-96.1%	-99.5%	-184.3%	-59.5%
Centennial Cellular	7.6%	-32.1%	-63.4%	-352.0%	-134.5%	-58.5%	-61.5%	NM
Cincinnati Bell	-59.1%	-94.0%	-82.5%	-125.0%	-81.3%	-87.5%	-193.7%	NM
Qwest	-60.5%	-101.9%	-96.8%	-147.8%	-211.1%	NM	-1566.7%	NM
Century Telephone	-73.3%	-147.3%	-151.5%	NAV	NAV	NAV	NAV	NAV
<b>Regional Growth in Net Additions</b>	-6.8%	-35.6%	-54.3%	-71.4%	-64.0%	-51.0%	-51.7%	-20.7%
<b>Total Industry Growth in Net Additions</b>	-14.9%	-28.6%	-33.8%	-47.0%	-30.0%	-5.0%	29.1%	64.0%

Note: Year-over-year comparison calculations are based on current data. Therefore, the historical data comparisons have been adjusted to account for fewer data points in the present data.

Source: Company reports and UBS estimates

## Service Revenue and ARPU

In Tables 17-25, we detail service revenues, roaming revenue metrics, ARPU, and lifetime revenue per subscriber for the companies we track. In Table 17, we rank the providers by total service revenue dollars (including roaming revenue). Additionally, we provide six-month CTIA industry revenue data for reference. As shown in the table, in the third quarter of 2003, we estimate that the total service revenues for the operators we track were roughly \$24.3 billion. This represented a roughly 12% increase over service revenues of \$21.7 billion posted in the third quarter of 2002. While the annual growth in revenues is slowing, there is still strong top-line growth contrary to other areas of telecom.

Excluding roaming revenues for the operators that report it separately, we estimate that total service revenues were \$23.7 billion, up 12.7% over the third quarter of 2002. We believe total service revenues less roaming revenues is a better estimate of total industry revenues since it eliminates double counting of revenues and allows us to more accurately compare our figures with revenues reported by the CTIA. The CTIA's reported revenues look at roaming on a net basis. Using the first half 2003 six-month results, our survey accounts for roughly 97.4% of the total revenues reported by the CTIA.

In Table 18, we look at year-over-year growth in service revenues. This analysis does not adjust for acquisitions in which pro forma data are not available. Accordingly, the analysis overstates the year-over-year growth rates for operators that made significant acquisitions.

T-Mobile continued to have the highest year-over-year growth in service revenues at about 49%. Sprint PCS, Cingular, and AT&T Wireless continued to post single-digit service revenue growth.

In fact, the third quarter of 2003 was the sixth consecutive quarter of sub-5% service revenue growth for Cingular. Cingular hasn't posted double-digit year-over-year service revenue growth since the fourth quarter of 2001. Moreover, the company has ranked last among the national operators for service revenue growth rates since that time.

For Sprint PCS, the third quarter of 2003 was the third consecutive quarter of a dramatic slowdown in its service revenue growth. In the third quarter of 2003, Sprint PCS posted service revenue growth of 6.6% versus 23.9% in the third quarter of 2002. While its Vision service revenues are ramping, they are still a small portion of the company's total service revenues. We estimate that Sprint PCS's data revenues for the third quarter of 2003 were about \$108 million versus \$55 million in the first quarter and \$84 million in the second quarter. More importantly, however, Sprint PCS's subscriber growth has been lackluster, coming in at 6.6% in the third quarter (which matches its services revenue growth for the quarter).

Verizon Wireless, on the other hand, posted its fifth consecutive 10%-plus quarter of year-over-year service revenue growth. The company's service revenues grew 14.9% while its subscriber base grew 14.3%. In its 10-Q filing, Verizon Wireless said that its service revenue growth is due to a higher proportion of subscribers choosing higher access price plans, including its America's Choice price plans. Management said that this increase was partially offset by decreased roaming revenue as a result of rate reductions with third-party carriers and decreased long distance revenue due to the continued increase in the popularity of bundled pricing plans.

As for the regional operators, ALLTEL also posted its fifth consecutive 10%-plus quarter of year-over-year service revenue growth with 10.5% growth in the third quarter of 2003. A primary reason for the strong growth has been due to revenues from its acquired CenturyTel markets. U.S. Cellular posted its fifth double-digit year-over-year increase in service revenues mostly because of its PrimeCo acquisition. U.S. Cellular's acquisition of PrimeCo closed on August 7, 2002.

Certain operators report roaming revenues they receive from other operators as a separate line item. These are primarily operators in the secondary markets that derive a meaningful percentage of their total service revenues from other operators' customers roaming onto their networks (i.e., outcollect revenues). In Table 19, we detail these operators' roaming revenues and annual growth in roaming revenues, while in Table 20, we detail roaming revenues as a percentage of overall service revenues.

In Table 19, we show that roaming revenues tend to be seasonally higher in the second and third quarters, as people travel more in the summer months. Also, growth in roaming revenues is generally declining. We believe this is partially attributable to larger operators negotiating lower roaming rates, as well as the national carriers expanding their own footprints through buildout, acquisitions, and joint buildout/roaming agreements. Sprint PCS and the Sprint PCS affiliates have lowered their reciprocal roaming rate dramatically in the first quarter of 2003. We expect growth in roaming revenues to continue to slow, as new customers (e.g., teenagers) may not use roaming as heavily as current subscribers do (which include business users).

In Table 21, we rank the operators by monthly ARPU, including roaming revenues. In Table 22, we show the calculated ARPU without roaming revenues. (For operators that do not report roaming revenues as a separate line item, their reported ARPU remains the same.)

Table 22 shows that for the fourth straight quarter, ARPU (on a weighted basis) for the national operators increased relative to the year-ago period. In fact, industry ARPU has been remarkably consistent over the measurement period, with the year-over-year growth between negative 1.7% and 2.0% for the national providers.

**The annual change in ARPU for the national operators remained positive for the fifth straight quarter**

In Table 23, we display ARPU net of bad debt expense for the carriers that report bad debt. We believe this metric is useful since it is this amount that the carriers actually realize from a customer. Among the national operators, Nextel has the lowest “leakage” from its calculated ARPU to its ARPU net of bad debt at \$0.56 per subscriber per month for the third quarter of 2003, while AT&T Wireless loses about \$2.14 per subscriber per month from bad debt. Triton PCS also posted a strong \$0.83 “leakage” figure due to its focus on high-end customers. Sprint PCS year-over-year comparisons for ARPU are more favorable when adjusted to exclude bad debt expense. In prior periods, Sprint PCS’s ARPU was more robust, but unfortunately so was its bad debt expense (due to its “Clear Pay” issues).

We believe there are a number of items that are positively affecting ARPU. First, wireless usage continues to be robust. Second, wireless data revenues are continuing to grow. And, third, wireless carriers are increasingly charging regulatory recovery fees to their subscribers. For a more detailed discussion on this topic, please refer to our second quarter “Wireless 411, Version 10.0” dated October 3, 2003.

**We believe that the strength in ARPU is due to higher usage, growing wireless data revenues, and increased regulatory recovery fees**

In Table 24, we have ranked the incremental ARPU of operators in our survey. Incremental ARPU is calculated as the year-over-year change in service revenues (excluding roaming revenues) divided by the year-over-year change in average subscribers, divided by three for the number of months in the quarter. As shown, the weighted-average industry incremental ARPU remains quite high during the third quarter of 2003 at \$58.49. This result compares with our calculated industry ARPU of \$55.73.

While we believe robust incremental ARPU may be evidence that wireless operators are continuing to garner high ARPU subscribers even as the industry’s penetration rate exceeds 50%, the items detailed earlier (regulatory fees and data take-rates) do somewhat impact the analysis. Namely, we recognize that increases (or decreases) in ARPU for existing subscribers can mask the “true” incremental ARPU from new customers.

For example, increases in regulatory revenues (either related to USF [Universal Service Fund] or regulatory recovery fees) across the entire base could distort the incremental ARPU figures. So, it’s important to differentiate between a regulatory fee that is charged across a carrier’s whole base and one that is phased in for new customers when looking at incremental ARPU.

Sprint PCS led the national providers with incremental ARPU of \$74.83; however, this result is particularly skewed by the growth in wholesale and other service revenues, which are included in our calculation. But, even if we were to adjust for this, Sprint PCS’s incremental ARPU would still compare favorably to the other carriers. Management attributed its strong ARPU to an increase in the average monthly recurring charge (MRC). As we have said in the past, PCS is

making a concerted effort to lower the amount of overage its customers pay in favor of higher monthly recurring charges. Management believes overage is a leading indicator of churn.

Also helping Sprint PCS's ARPU is the strong take rate for its Vision data service from both new and existing customers. Specifically, of its Vision subscribers added in the third quarter of 2003, over half were new to Sprint PCS and the remaining were existing subscribers upgrading to take Vision service. We also believe increases in the USF charges, which impacted both new and existing users, may have distorted the incremental ARPU result.

AT&T Wireless also posted solid incremental ARPU of \$63.35 versus its overall \$61.20 calculated ARPU. We believe both increasing data revenues and an increasing percentage of its customers paying regulatory fee recoveries are helping the company's revenue figures. In terms of data revenues, AT&T Wireless said that at the end of the third quarter it had about one million customers paying about \$7-8 monthly for mMode service plans. The company said it also has about 0.5 million casual mMode users. AT&T Wireless said it has about 4.5 million active SMS users sending about 30 messages a month and paying about \$3.50 per month for the service.

In terms of regulatory recoveries, AT&T Wireless noted that it is increasingly collecting a \$1.75 per subscriber per month regulatory recovery fee it began imposing in the first quarter of 2003 on new contracts (from new customers as well as existing customers signing new contracts). The company mentioned that it is now collecting that fee from about half its base. As existing and new subscribers sign new contracts, this percentage will increase.

Five of the six national operators— Nextel, Sprint PCS, AT&T Wireless, T-Mobile, and Verizon Wireless—had incremental ARPUs greater than their overall ARPUs. Cingular, on the other hand, had a third quarter incremental ARPU of only \$17.37. In its 10-Q filing, Cingular said that increased sales of lower ARPU "Family Talk" plans, in combination with a higher percentage of lower ARPU reseller and prepaid customers in its customer base, negatively affected its overall ARPU when compared with the same period in 2002. Additionally, Cingular said that a revenue reclassification due to the adoption of EITF 00-21 had an approximate \$0.27 negative impact on ARPU for the three-month period ended September 30, 2003.

Triton PCS's incremental ARPU was \$3.63 lower than its overall ARPU (\$52.96 incremental ARPU versus \$56.59 overall ARPU). We believe this is primarily due to a repricing of its customer base over the past several quarters as a large portion of its existing customers migrated to its "UnPlan."

In Table 25, we rank the operators according to the estimated lifetime revenue per subscriber (LRPS). This metric attempts to capture the expected lifetime revenue of a subscriber given its ARPU and churn rate. We calculate LRPS by

dividing monthly ARPU (excluding roaming) by the monthly churn rate. Generally, operators with the lower churn rates post the highest LRPS. Conversely, operators with the most trouble with churn have relatively low LRPS.

As shown in Table 25, Nextel and Nextel Partners continue to post the highest LRPS. This should not come as a surprise, in our view, since these operators lead the industry in terms of ARPU and churn. Nextel, which was the only national operator to see a decrease in churn over the second quarter, was also the only company to see an increase in its LRPS. During the second quarter, Nextel posted the first \$5,000-plus lifetime revenue per subscriber result for a national operator over the measurement period at an impressive \$5,063 (up from \$4,303 in the second quarter of 2003).

In terms of ARPU going forward, we do not expect material pricing cuts in the consumer space due to local number portability. However, we believe LNP will shift the bargaining power in favor of enterprises and this could result in a bleed over the next two years for enterprise ARPU and service revenues. Who are the potential net losers? We believe carriers with big embedded bases of enterprise users could suffer an ARPU drain. Given our CIO survey results, these carriers include AT&T Wireless and Verizon Wireless. Another carrier that potentially could see an ARPU drain would be Nextel, but given that its push-to-talk offering is already priced at unlimited usage and the company already offers discounts on the purchase of bulk minutes to corporations, we believe Nextel's impact will be more muted.

Table 17: Total Service Revenues Including Roaming (\$ in thousands)

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Verizon Wireless	\$4,031,000	\$4,052,000	\$4,369,000	\$4,613,000	\$4,713,000	\$4,660,000	\$5,011,000	\$5,299,000
AT&T Wireless	\$3,241,000	\$3,355,000	\$3,625,000	\$3,765,000	\$3,738,000	\$3,743,000	\$3,939,000	\$4,073,000
Cingular	\$3,364,000	\$3,316,000	\$3,492,000	\$3,525,000	\$3,413,000	\$3,346,000	\$3,531,000	\$3,571,000
Sprint PCS	\$2,423,000	\$2,553,000	\$2,722,000	\$2,813,000	\$2,773,000	\$2,679,000	\$2,859,000	\$3,000,000
Nextel	\$1,758,368	\$1,831,000	\$2,032,000	\$2,139,000	\$2,184,000	\$2,210,000	\$2,385,000	\$2,599,000
T-Mobile	\$973,387	\$1,037,230	\$1,152,000	\$1,280,000	\$1,408,000	\$1,559,918	\$1,771,662	\$1,901,648
<b>National Total Service Revenue</b>	<b>\$15,790,755</b>	<b>\$16,144,230</b>	<b>\$17,392,000</b>	<b>\$18,135,000</b>	<b>\$18,229,000</b>	<b>\$18,197,918</b>	<b>\$19,496,662</b>	<b>\$20,443,648</b>
<b>Affiliate Operators</b>								
Nextel Partners	\$115,985	\$127,664	\$153,418	\$174,534	\$190,553	\$200,542	\$226,507	\$260,650
Triton PCS	\$141,581	\$150,659	\$173,734	\$183,941	\$169,473	\$176,278	\$195,162	\$199,553
Alamosa PCS	\$111,782	\$120,066	\$126,037	\$142,771	\$142,896	\$135,814	\$149,590	\$157,791
US Unwired	\$100,468	\$112,781	\$132,778	\$138,804	\$139,073	\$117,955	\$128,111	\$136,439
AirGate PCS	\$63,858	\$72,799	\$78,770	\$84,703	\$78,845	\$74,057	\$80,700	\$86,102
UbiquiTel	\$41,591	\$43,550	\$51,806	\$58,901	\$58,217	\$56,244	\$63,428	\$69,289
Horizon PCS	\$42,295	\$45,834	\$50,216	\$54,274	\$57,866	\$57,377	\$61,436	NAV
<b>Affiliate Total Service Revenue</b>	<b>\$617,560</b>	<b>\$673,353</b>	<b>\$766,759</b>	<b>\$837,928</b>	<b>\$836,923</b>	<b>\$818,267</b>	<b>\$904,934</b>	<b>\$909,824</b>
<b>Affiliate Total Service Revenue, Ex Roaming</b>	<b>\$392,976</b>	<b>\$472,438</b>	<b>\$510,204</b>	<b>\$547,518</b>	<b>\$564,799</b>	<b>\$601,553</b>	<b>\$664,938</b>	<b>\$658,125</b>
<b>Regional Operators</b>								
Alltel	\$938,896	\$914,746	\$965,543	\$1,053,170	\$1,065,747	\$1,047,010	\$1,127,642	\$1,163,786
US Cellular	\$461,946	\$461,113	\$501,153	\$561,240	\$575,387	\$564,601	\$610,109	\$628,440
Dobson Communications	\$244,741	\$219,965	\$249,993	\$265,194	\$245,850	\$235,561	\$260,878	\$276,718
Western Wireless	\$206,629	\$198,688	\$210,840	\$217,733	\$211,023	\$210,546	\$228,590	\$248,216
Leap Wireless (Cricket)	\$93,468	\$128,020	\$144,390	\$143,561	\$151,723	\$160,648	\$162,415	\$160,849
Rural Cellular	\$102,437	\$101,659	\$114,328	\$118,624	\$106,884	\$109,985	\$122,693	\$130,128
Qwest	\$167,306	\$160,560	\$160,632	\$155,171	\$142,965	\$131,064	\$125,904	\$125,955
Centennial Cellular	\$82,463	\$80,317	\$88,738	\$90,544	\$82,786	\$79,642	\$83,820	\$89,086
Centennial PCS	\$52,788	\$57,373	\$63,232	\$62,697	\$59,444	\$62,227	\$66,277	\$71,764
Cincinnati Bell	\$59,900	\$60,500	\$65,800	\$65,200	\$60,000	\$60,900	\$64,900	\$61,900
Century Telephone	\$106,109	\$100,200	\$104,400	NAV	NAV	NAV	NAV	NAV
<b>Regional Total Service Revenue</b>	<b>\$2,516,683</b>	<b>\$2,483,141</b>	<b>\$2,669,049</b>	<b>\$2,733,134</b>	<b>\$2,701,809</b>	<b>\$2,662,184</b>	<b>\$2,853,228</b>	<b>\$2,956,842</b>
<b>Regional Total Service Revenue, Ex Roaming</b>	<b>\$2,231,098</b>	<b>\$2,251,547</b>	<b>\$2,397,819</b>	<b>\$2,432,849</b>	<b>\$2,444,690</b>	<b>\$2,426,726</b>	<b>\$2,594,401</b>	<b>\$2,687,560</b>
<b>Total Service Revenues, Incl. Roaming</b>	<b>\$18,924,997</b>	<b>\$19,300,724</b>	<b>\$20,827,808</b>	<b>\$21,706,061</b>	<b>\$21,767,732</b>	<b>\$21,678,369</b>	<b>\$23,254,824</b>	<b>\$24,310,314</b>
<b>Total Service Revenues, Ex Roaming</b>	<b>\$18,414,829</b>	<b>\$18,868,215</b>	<b>\$20,300,023</b>	<b>\$21,115,366</b>	<b>\$21,238,489</b>	<b>\$21,226,197</b>	<b>\$22,756,001</b>	<b>\$23,789,333</b>
<b>Six Month Revenue</b>	<b>\$37,948,096</b>		<b>\$40,128,533</b>		<b>\$43,473,794</b>		<b>\$44,933,193</b>	
<b>Six Month Revenue, Ex Roaming</b>	<b>\$36,821,641</b>		<b>\$39,168,239</b>		<b>\$42,353,855</b>		<b>\$43,982,198</b>	
<b>CTIA Revenue (1)</b>	<b>\$37,979,520</b>		<b>\$40,369,047</b>		<b>\$43,875,347</b>		<b>\$45,158,601</b>	

(1) Estimated CTIA six-month revenue including toll.  
Source: Company reports, CTIA, and UBS estimates

**Table 18: Year-Over-Year Growth in Total Service Revenue (percentage)**

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
T-Mobile	54.1%	34.9%	37.3%	40.9%	44.6%	50.4%	53.8%	48.6%
Nextel	23.7%	22.5%	25.9%	26.7%	24.2%	20.7%	17.4%	21.5%
Verizon Wireless	8.1%	8.6%	7.5%	10.3%	16.9%	15.0%	14.7%	14.9%
AT&T Wireless	23.1%	14.6%	16.2%	16.5%	15.3%	11.6%	8.7%	8.2%
Sprint PCS	46.8%	40.8%	31.5%	23.9%	14.4%	4.9%	5.0%	6.6%
Cingular	12.5%	8.2%	4.6%	2.2%	1.5%	0.9%	1.1%	1.3%
<b>National Weighted Average</b>	21.0%	17.0%	15.6%	15.3%	15.4%	12.7%	12.1%	12.7%
<b>Affiliate Operators</b>								
Nextel Partners	126.0%	102.4%	85.0%	71.8%	64.3%	57.1%	47.6%	49.3%
UbiquiTel	1014.4%	647.3%	452.5%	111.1%	40.0%	29.1%	22.4%	17.6%
Alamosa PCS	316.1%	186.4%	62.6%	44.0%	27.8%	13.1%	18.7%	10.5%
Triton PCS	42.7%	41.0%	36.6%	32.7%	19.7%	17.0%	12.3%	8.5%
AirGate PCS	208.1%	111.6%	66.5%	43.9%	23.5%	1.7%	2.5%	1.7%
US Unwired	139.0%	108.0%	90.3%	55.6%	38.4%	4.6%	-3.5%	-1.7%
Horizon PCS	264.4%	152.1%	115.8%	63.6%	36.8%	25.2%	22.3%	NAV
<b>Affiliate Weighted Average</b>	141.7%	107.5%	75.3%	52.8%	35.5%	21.5%	18.0%	16.1%
<b>Affiliate Weighted Average, Ex Roaming</b>	229.4%	169.6%	107.9%	76.8%	43.7%	27.3%	30.3%	33.4%
<b>Regional Operators</b>								
Centennial PCS	17.2%	20.0%	31.0%	25.5%	12.6%	8.5%	4.8%	14.5%
Western Wireless	-3.5%	-7.0%	-6.8%	0.2%	2.1%	6.0%	8.4%	14.0%
US Cellular	9.6%	8.8%	8.7%	17.1%	24.6%	22.4%	21.7%	12.0%
Leap Wireless (Cricket)	932.0%	399.0%	265.0%	150.8%	62.3%	25.5%	12.5%	12.0%
Alltel	5.8%	5.8%	6.1%	13.7%	13.5%	14.5%	16.8%	10.5%
Rural Cellular	8.7%	9.0%	5.4%	0.2%	4.3%	8.2%	7.3%	9.7%
Dobson Communications	16.6%	4.2%	0.6%	-2.2%	0.5%	7.1%	4.4%	4.3%
Centennial Cellular	-11.0%	-0.3%	8.0%	3.1%	0.4%	-0.8%	-5.5%	-1.6%
Cincinnati Bell	27.2%	12.9%	11.7%	8.3%	0.2%	0.7%	-1.4%	-5.1%
Qwest	33.1%	25.0%	7.8%	-9.3%	-14.5%	-18.4%	-21.6%	-18.8%
Century Telephone	-1.7%	-0.9%	-2.5%	NAV	NAV	NAV	NAV	NAV
<b>Regional Weighted Average</b>	11.6%	10.7%	9.4%	12.1%	7.4%	7.2%	6.9%	8.2%
<b>Regional Weighted Average, Ex Roaming</b>	14.0%	14.1%	12.5%	14.7%	9.6%	7.8%	8.2%	10.5%
<b>Industry Weighted Average</b>	20.7%	16.9%	15.2%	14.1%	15.0%	12.3%	11.7%	12.3%

Note: Year-over-year comparison calculations are based on current data. Therefore, the historical data comparisons have been adjusted to account for fewer data points in the present data.

Source: Company reports and UBS estimates

**Table 19: Roaming Statistics for Selected Operators in Secondary Markets**

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>Roaming Revenues (in 000s)</b>								
Dobson Communications	\$90,993	\$70,562	\$86,866	\$96,064	\$82,866	\$73,080	\$89,144	\$81,463
Western Wireless	\$58,396	\$60,863	\$64,192	\$69,799	\$63,081	\$62,078	\$64,190	\$73,365
US Cellular	\$63,217	\$54,326	\$62,336	\$74,243	\$64,533	\$54,606	\$56,840	\$59,638
Triton PCS	\$32,914	\$35,126	\$45,508	\$50,396	\$44,375	\$42,771	\$49,323	\$49,728
Alamosa PCS	\$32,009	\$26,568	\$33,457	\$39,129	\$40,689	\$31,790	\$35,040	\$41,126
Rural Cellular	\$26,870	\$26,162	\$33,855	\$35,400	\$27,286	\$29,062	\$31,789	\$37,598
US Unwired	\$36,441	\$34,844	\$46,642	\$51,138	\$50,318	\$26,607	\$31,715	\$35,154
Nextel Partners	\$17,610	\$15,353	\$19,997	\$22,076	\$22,045	\$22,949	\$26,917	\$32,622
AirGate PCS	\$16,618	\$14,374	\$21,299	\$21,335	\$18,911	\$13,894	\$15,764	\$19,653
Centennial Cellular	\$22,964	\$19,681	\$23,981	\$24,779	\$19,353	\$16,632	\$16,864	\$17,218
UbiquiTel	\$12,880	\$9,505	\$14,200	\$17,100	\$14,400	\$10,299	\$10,819	\$13,778
Horizon PCS	\$12,895	\$10,819	\$13,116	\$14,993	\$16,853	\$13,798	\$13,579	NAV
Century Telephone	\$23,145	NAV						
<b>Total</b>	<b>\$446,951</b>	<b>\$378,183</b>	<b>\$465,449</b>	<b>\$516,452</b>	<b>\$464,710</b>	<b>\$397,566</b>	<b>\$441,984</b>	<b>\$461,343</b>
<b>Annual Growth</b>	<b>22.3%</b>	<b>12.9%</b>	<b>13.6%</b>	<b>7.9%</b>	<b>4.0%</b>	<b>5.1%</b>	<b>-5.0%</b>	<b>-8.0%</b>

<b>Annual Growth in Roaming Revenues</b>								
Nextel Partners	110.3%	60.6%	38.0%	34.4%	25.2%	49.5%	34.6%	47.8%
Rural Cellular	4.0%	12.7%	19.4%	-7.1%	1.5%	11.1%	-6.1%	6.2%
Alamosa PCS	402.5%	132.8%	38.3%	23.8%	27.1%	19.7%	4.7%	5.1%
Western Wireless	-13.2%	-2.1%	-6.8%	10.0%	8.0%	2.0%	0.0%	5.1%
Triton PCS	22.6%	36.4%	40.7%	40.4%	34.8%	21.8%	8.4%	-1.3%
AirGate PCS	124.9%	30.7%	24.3%	7.7%	13.8%	-3.3%	-26.0%	-7.9%
Dobson Communications	11.8%	-9.0%	-12.2%	-14.5%	-8.9%	3.6%	2.6%	-15.2%
UbiquiTel	980.8%	257.3%	228.2%	46.8%	11.8%	8.4%	-23.8%	-19.4%
US Cellular	-4.0%	-15.2%	-7.4%	-4.6%	2.1%	0.5%	-8.8%	-19.7%
Centennial Cellular	-27.6%	-13.1%	10.1%	-4.5%	-15.7%	-15.5%	-29.7%	-30.5%
US Unwired	134.9%	85.8%	91.5%	51.0%	38.1%	-23.6%	-32.0%	-31.3%
Horizon PCS	176.9%	76.9%	69.5%	27.1%	30.7%	27.5%	3.5%	NAV
Century Telephone	-10.5%	NAV						

Note: Year-over-year comparison calculations are based on current data. Therefore, the historical data comparisons have been adjusted to account for fewer data points in the present data.

Source: Company reports and UBS estimates

**Table 20: Roaming Revenues—as Percentage of Total Service Revenues**

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>Western Wireless</b>	28.3%	30.6%	30.4%	32.1%	29.9%	29.5%	28.1%	29.6%
<b>Dobson Communications</b>	37.2%	32.1%	34.7%	36.2%	33.7%	31.0%	34.2%	29.4%
<b>Rural Cellular</b>	26.2%	25.7%	29.6%	29.8%	25.5%	26.4%	25.9%	28.9%
<b>Alamosa PCS</b>	28.6%	22.1%	26.5%	27.4%	28.5%	23.4%	23.4%	26.1%
<b>US Unwired</b>	36.3%	30.9%	35.1%	36.8%	36.2%	22.6%	24.8%	25.8%
<b>Triton PCS</b>	23.2%	23.3%	26.2%	27.4%	26.2%	24.3%	25.3%	24.9%
<b>AirGate PCS</b>	26.0%	19.7%	27.0%	25.2%	24.0%	18.8%	19.5%	22.8%
<b>UbiquiTel</b>	31.0%	21.8%	27.4%	29.0%	24.7%	18.3%	17.1%	19.9%
<b>Centennial Cellular</b>	27.8%	24.5%	27.0%	27.4%	23.4%	20.9%	20.1%	19.3%
<b>Nextel Partners</b>	15.2%	12.0%	13.0%	12.6%	11.6%	11.4%	11.9%	12.5%
<b>US Cellular</b>	13.7%	11.8%	12.4%	13.2%	11.2%	9.7%	9.3%	9.5%
<b>Horizon PCS</b>	30.5%	23.6%	26.1%	27.6%	29.1%	24.0%	22.1%	NAV
<b>Century Telephone</b>	21.8%	NAV						

Source: Company reports and UBS estimates

Table 21: ARPU—Including Roaming

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Nextel	\$69.00	\$67.55	\$71.12	\$71.32	\$68.76	\$67.15	\$68.85	\$70.88
Sprint PCS	\$60.53	\$59.83	\$63.11	\$63.21	\$61.95	\$58.59	\$61.84	\$62.84
AT&T Wireless	\$60.80	\$58.60	\$60.40	\$61.60	\$60.00	\$58.70	\$60.60	\$61.20
T-Mobile	\$48.73	\$47.71	\$49.30	\$50.42	\$49.89	\$50.11	\$53.01	\$53.82
Cingular	\$52.31	\$50.91	\$52.89	\$53.10	\$51.71	\$50.65	\$52.60	\$51.73
Verizon Wireless	\$46.27	\$45.80	\$48.63	\$49.74	\$49.08	\$47.20	\$49.17	\$50.01
<b>National Weighted Average</b>	\$54.70	\$53.77	\$56.11	\$57.04	\$55.79	\$54.18	\$56.37	\$57.18
<b>Year over Year Change (%)</b>	-1.7%	-1.2%	-0.9%	0.4%	2.0%	0.7%	0.5%	0.3%
<b>Affiliate Operators</b>								
AirGate PCS	\$81.11	\$78.64	\$80.70	\$84.26	\$75.96	\$69.42	\$74.44	\$79.33
Nextel Partners	\$81.38	\$76.26	\$78.31	\$78.62	\$76.68	\$72.58	\$75.13	\$79.27
Ubiqitel	\$88.00	\$75.00	\$83.00	\$87.00	\$79.00	\$71.00	\$75.00	\$77.00
Alamosa PCS	\$84.00	\$76.00	\$79.00	\$82.00	\$79.00	\$71.00	\$75.00	\$77.00
Triton PCS	\$72.41	\$71.49	\$78.11	\$78.61	\$69.46	\$69.46	\$74.67	\$75.38
US Unwired	\$85.31	\$81.82	\$83.62	\$85.97	\$84.56	\$68.97	\$72.43	\$74.54
Horizon PCS	\$83.00	\$74.00	\$75.00	\$76.00	\$76.00	\$68.00	\$68.00	NAV
<b>Affiliate Weighted Average</b>	\$80.59	\$75.94	\$78.47	\$81.35	\$76.73	\$70.47	\$73.90	\$77.15
<b>Year over Year Change (%)</b>	-3.2%	-5.0%	-8.1%	-6.6%	-4.8%	-7.2%	-5.8%	-5.6%
<b>Regional Operators</b>								
Western Wireless	\$59.84	\$57.32	\$60.83	\$62.11	\$59.15	\$58.45	\$62.41	\$66.95
Dobson Communications	\$62.33	\$55.77	\$63.36	\$65.57	\$59.34	\$55.89	\$58.44	\$58.67
Rural Cellular	\$52.15	\$50.57	\$55.35	\$56.42	\$50.00	\$50.53	\$55.73	\$58.64
Centennial PCS	\$57.39	\$57.94	\$59.04	\$58.35	\$55.31	\$54.77	\$55.97	\$58.26
Centennial Cellular	\$54.08	\$51.04	\$55.01	\$56.19	\$51.87	\$49.67	\$51.75	\$54.50
Alltel	\$47.38	\$45.54	\$47.30	\$47.84	\$46.98	\$45.59	\$48.01	\$49.10
US Cellular	\$45.02	\$44.06	\$47.38	\$49.59	\$47.67	\$45.12	\$47.39	\$49.05
Qwest	\$51.00	\$48.00	\$48.00	\$47.00	\$45.00	\$43.00	\$43.00	\$45.00
Cincinnati Bell	\$44.41	\$43.53	\$46.90	\$46.43	\$42.77	\$43.18	\$46.29	\$44.58
Leap Wireless (Cricket)	\$34.66	\$33.85	\$34.03	\$32.43	\$33.62	\$35.39	\$36.42	\$36.50
Century Telephone	\$44.43	\$42.11	\$44.27	NAV	NAV	NAV	NAV	NAV
<b>Regional Weighted Average</b>	\$48.77	\$46.46	\$48.97	\$49.81	\$47.99	\$46.50	\$48.95	\$50.44
<b>Year over Year Change (%)</b>	-14.1%	-5.6%	-4.7%	-3.8%	-1.6%	0.1%	-0.1%	1.3%

Note: Year-over-year comparison calculations are based on current data. Therefore, the historical data comparisons have been adjusted to account for fewer data points in the present data.

Source: Company reports and UBS estimates

Table 22: Calculated ARPU (less roaming)

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Nextel	\$69.00	\$67.55	\$71.12	\$71.32	\$68.76	\$67.15	\$68.85	\$70.88
Sprint PCS	\$60.53	\$59.83	\$63.11	\$63.21	\$61.95	\$58.59	\$61.84	\$62.84
AT&T Wireless	\$60.80	\$58.60	\$60.40	\$61.60	\$60.00	\$58.70	\$60.60	\$61.20
T-Mobile	\$48.73	\$47.71	\$49.30	\$50.42	\$49.89	\$50.11	\$53.01	\$53.82
Cingular	\$52.31	\$50.91	\$52.89	\$53.10	\$51.71	\$50.65	\$52.60	\$51.73
Verizon Wireless	\$46.27	\$45.80	\$48.63	\$49.74	\$49.08	\$47.20	\$49.17	\$50.01
<b>National Weighted Average</b>	\$54.70	\$53.77	\$56.11	\$57.04	\$55.79	\$54.18	\$56.37	\$57.18
<b>Year over Year Change (%)</b>	-1.7%	-1.2%	-0.9%	0.4%	2.0%	0.7%	0.5%	0.3%
<b>Affiliate Operators</b>								
Nextel Partners	\$69.03	\$67.09	\$68.11	\$68.67	\$67.80	\$64.28	\$66.20	\$69.35
UbiquiTel	\$60.75	\$59.02	\$60.25	\$61.74	\$59.46	\$57.81	\$62.05	\$62.06
AirGate PCS	\$60.00	\$63.11	\$55.84	\$63.04	\$57.74	\$56.40	\$59.90	\$61.22
Alamosa PCS	\$60.00	\$59.00	\$55.75	\$60.00	\$57.00	\$55.00	\$57.00	\$57.00
Triton PCS	\$55.58	\$54.83	\$57.65	\$57.07	\$51.27	\$52.61	\$55.80	\$56.59
US Unwired	\$54.37	\$56.54	\$54.25	\$54.30	\$53.97	\$53.41	\$54.50	\$55.33
Horizon PCS	\$57.00	\$56.46	\$54.03	\$54.90	\$53.32	\$51.45	\$52.82	NAV
<b>Affiliate Weighted Average</b>	\$59.53	\$59.41	\$58.59	\$60.37	\$57.70	\$56.51	\$58.95	\$60.87
<b>Year over Year Change (%)</b>	-1.4%	0.8%	-4.0%	-1.9%	-3.1%	-4.9%	0.6%	0.2%
<b>Regional Operators</b>								
Centennial PCS	\$57.39	\$57.94	\$59.04	\$58.35	\$55.31	\$54.77	\$55.97	\$58.26
Alltel	\$47.38	\$45.54	\$47.30	\$47.84	\$46.98	\$45.59	\$48.01	\$49.10
Western Wireless	\$42.34	\$39.33	\$42.05	\$42.12	\$41.55	\$41.00	\$44.78	\$47.05
Qwest	\$51.00	\$48.00	\$48.00	\$47.00	\$45.00	\$43.00	\$43.00	\$45.00
Cincinnati Bell	\$44.41	\$43.53	\$46.90	\$46.43	\$42.77	\$43.18	\$46.29	\$44.58
US Cellular	\$38.96	\$38.94	\$41.57	\$42.79	\$42.54	\$40.69	\$42.97	\$44.40
Centennial Cellular	\$39.02	\$38.54	\$40.14	\$40.81	\$39.74	\$39.30	\$41.34	\$43.96
Rural Cellular	\$38.47	\$37.56	\$38.96	\$39.58	\$37.23	\$37.18	\$41.29	\$41.69
Dobson Communications	\$39.16	\$37.88	\$41.34	\$41.82	\$39.34	\$38.55	\$38.47	\$41.39
Leap Wireless (Cricket)	\$34.66	\$33.85	\$34.03	\$32.43	\$33.62	\$35.39	\$36.42	\$36.50
Century Telephone	\$34.74	NAV						
<b>Regional Weighted Average</b>	\$43.24	\$42.12	\$44.00	\$44.34	\$43.42	\$42.39	\$44.51	\$45.84
<b>Year over Year Change (%)</b>	-12.3%	-3.6%	-2.9%	-1.6%	0.4%	0.6%	1.2%	3.4%
<b>CTIA reported six-month industry ARPU</b>	\$51.30		\$51.18		\$53.12		\$52.12	
<b>Industry Calculated ARPU</b>	\$53.10	\$52.19	\$54.41	\$55.31	\$54.07	\$52.58	\$54.78	\$55.73
<b>Year-over-year Growth</b>	-3.1%	-1.4%	-1.2%	0.2%	1.8%	0.7%	0.7%	0.8%

Note: Year-over-year comparison calculations are based on current data. Therefore, the historical data comparisons have been adjusted to account for fewer data points in the present data.

(1) Weighted average ARPU of companies detailed above.

Source: Company reports, CTIA, and UBS estimates

**Table 23: ARPU, Net of Bad Debt Expense**

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Nextel	\$65.44	\$64.07	\$68.26	\$68.40	\$66.38	\$65.43	\$68.12	\$70.33
Sprint PCS	\$57.00	\$56.69	\$59.49	\$58.44	\$59.73	\$56.61	\$60.61	\$61.18
AT&T Wireless	\$57.67	\$55.78	\$58.02	\$59.71	\$57.77	\$56.52	\$58.74	\$59.06
<b>Affiliate Operators</b>								
UbiquiTel	\$48.05	\$47.93	\$48.55	\$53.03	\$56.88	\$56.42	\$60.28	\$61.95
AirGate PCS	\$52.87	\$56.58	\$50.80	\$58.55	\$55.64	\$56.43	\$58.45	\$59.86
Alamosa PCS	\$50.97	\$53.83	\$49.06	\$52.18	\$52.81	\$51.56	\$55.26	\$56.46
Triton PCS	\$53.98	\$53.62	\$56.18	\$54.79	\$48.10	\$51.62	\$55.13	\$55.76
<b>Regional Operators</b>								
US Cellular	\$38.19	\$38.16	\$40.30	\$41.09	\$40.63	\$39.32	\$41.70	\$43.48
Rural Cellular	\$36.18	\$36.32	\$38.38	\$38.63	\$36.16	\$36.31	\$40.20	\$40.66

Source: Company reports and UBS estimates

Table 24: Incremental ARPU

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Sprint PCS	\$63.58	\$62.16	\$59.42	\$66.19	\$71.27	\$46.28	\$67.55	\$74.83
Nextel	\$56.27	\$56.66	\$71.02	\$77.05	\$72.83	\$65.28	\$59.25	\$71.99
AT&T Wireless	\$45.30	\$43.35	\$48.03	\$56.09	\$58.63	\$58.89	\$67.09	\$63.35
T-Mobile	\$46.39	\$42.62	\$50.64	\$53.25	\$52.71	\$55.67	\$61.63	\$62.51
Verizon Wireless	\$34.87	\$40.72	\$41.74	\$54.96	\$76.65	\$59.32	\$53.15	\$51.87
Cingular	\$57.62	\$52.13	\$45.43	\$28.76	\$29.01	\$32.63	\$35.09	\$17.37
<b>Affiliate Operators</b>								
Nextel Partners	\$67.28	\$64.62	\$65.70	\$65.29	\$66.16	\$59.95	\$62.66	\$70.76
US Unwired	\$59.54	\$63.30	\$55.28	\$52.82	\$52.95	\$40.41	\$56.71	\$63.09
UbiquiTel	\$60.68	\$59.36	\$60.59	\$61.38	\$57.15	\$54.59	\$67.05	\$63.04
Triton PCS	\$48.86	\$50.25	\$52.95	\$53.85	\$33.89	\$41.76	\$45.23	\$52.96
Alamosa PCS	\$59.70	\$58.53	\$49.04	\$55.09	\$48.40	\$34.33	\$62.96	\$40.77
AirGate PCS	\$60.41	\$63.19	\$49.61	\$64.78	\$50.65	\$12.32	\$136.06	\$38.43
Horizon PCS	\$54.39	\$58.47	\$53.35	\$52.58	\$45.83	\$37.75	\$49.05	NAV
<b>Regional Operators</b>								
Centennial Cellular	(\$10.50)	\$16.67	\$32.68	\$36.11	\$55.10	\$79.13	\$333.18	\$262.49
Cincinnati Bell	\$28.33	\$22.16	\$32.55	\$39.64	\$1.84	\$19.46	\$1,001.67	\$211.54
Western Wireless	\$3.05	(\$45.07)	(\$58.95)	(\$58.87)	(\$4.86)	\$91.08	\$96.61	\$132.04
Rural Cellular	\$22.86	\$23.11	\$1.78	\$17.23	\$23.23	\$32.59	\$76.72	\$79.76
Alltel	\$38.72	\$40.57	\$43.42	\$51.58	\$44.26	\$45.96	\$52.73	\$65.62
Centennial PCS	\$25.02	\$29.15	\$45.56	\$55.55	\$42.96	\$33.22	\$26.92	\$57.62
US Cellular	\$31.77	\$49.25	\$56.44	\$61.96	\$63.13	\$49.47	\$49.29	\$57.19
Dobson Communications	NAV	\$33.29	\$42.44	\$38.83	\$42.61	\$48.33	\$16.60	\$38.83
Leap Wireless (Cricket)	\$34.79	\$34.17	\$34.26	\$31.49	\$32.07	\$43.14	\$83.06	(\$1,085.86)
Qwest	\$40.18	\$41.37	\$24.20	(\$82.56)	\$235.17	NAV	NAV	NAV
Century Telephone	\$6.09	NAV	NAV	NAV	NAV	NAV	NAV	NAV
<b>Industry Calculated Incremental ARPU</b>	\$46.49	\$48.49	\$50.79	\$55.90	\$65.54	\$55.29	\$57.36	\$58.49

Note: Year-over-year comparison calculations are based on current data. Therefore, the historical data comparisons have been adjusted to account for fewer data points in the present data.

Source: Company reports and UBS estimates

**Table 25: Lifetime Revenue Per Subscriber (LRPS)**

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Nextel	\$3,136	\$3,217	\$3,387	\$3,566	\$3,274	\$3,534	\$4,303	\$5,063
Verizon Wireless	\$1,714	\$1,782	\$2,114	\$2,135	\$2,337	\$2,269	\$2,892	\$2,703
Sprint PCS	\$2,018	\$1,994	\$2,168	\$1,644	\$1,772	\$1,901	\$2,548	\$2,346
AT&T Wireless	\$2,252	\$2,254	\$2,517	\$2,124	\$2,500	\$2,552	\$2,755	\$2,247
Cingular	\$1,687	\$1,746	\$1,959	\$1,800	\$1,915	\$1,959	\$2,104	\$1,847
T-Mobile	\$1,042	\$1,088	\$1,194	\$1,200	\$1,425	\$1,665	\$1,791	\$1,631
<b>Affiliate Operators</b>								
Nextel Partners	\$4,375	\$4,220	\$4,282	\$4,313	\$4,250	\$3,794	\$4,149	\$4,643
Triton PCS	\$2,807	\$2,913	\$2,861	\$2,542	\$2,093	\$2,481	\$2,695	\$2,302
Alamosa PCS	\$1,793	\$1,730	\$1,692	\$1,431	\$1,534	\$1,686	\$2,097	\$1,796
UbiquiTel	\$1,507	\$1,383	\$1,400	\$1,219	\$1,489	\$1,584	\$2,016	\$1,707
AirGate PCS	\$1,714	\$1,806	\$1,710	\$1,365	\$1,429	\$1,615	\$1,949	\$1,697
US Unwired	\$1,518	\$1,384	\$1,313	\$1,051	\$1,178	\$1,304	\$1,682	\$1,535
Horizon PCS	\$1,900	\$1,750	\$1,750	\$1,410	\$1,543	\$1,793	\$1,963	NAV
<b>Regional Operators</b>								
US Cellular	\$1,914	\$1,668	\$2,051	\$1,707	\$1,834	\$1,940	\$2,306	\$2,224
Western Wireless	\$1,888	\$1,599	\$1,816	\$1,779	\$1,985	\$2,242	\$1,974	\$2,098
Centennial PCS	\$1,551	\$1,413	\$1,640	\$1,459	\$1,627	\$1,711	\$1,513	\$2,081
Centennial Cellular	\$1,697	\$1,752	\$2,230	\$1,700	\$1,806	\$1,572	\$1,879	\$1,911
Rural Cellular	\$1,597	\$1,782	\$2,312	\$1,674	\$1,759	\$1,811	\$2,283	\$1,804
Alltel	\$1,977	\$1,872	\$2,017	\$1,974	\$1,709	\$1,720	\$1,962	\$1,790
Cincinnati Bell	\$1,572	\$1,720	\$1,911	\$1,713	\$1,490	\$1,544	\$1,649	\$1,548
Qwest	\$1,159	\$923	\$1,171	\$1,093	\$1,000	\$915	\$915	\$938
Leap Wireless (Cricket)	\$1,187	\$1,043	\$743	\$713	\$850	\$875	\$785	\$818
Century Telephone	\$1,151	NAV						

Source: Company reports and UBS estimates

## Price Elasticity of Demand (Usage)

In Tables 26-30, we detail the monthly minutes of use (MOU) per average subscriber, the effective price per minute (commonly referred to as the pricing yield), and the price elasticity for more than half of the companies we monitor.

The MOU figures shown in Table 26 are for a carrier's home subscribers and do not include the roaming minutes from other operators' subscribers. We rank the carriers from highest to lowest MOU. As shown in Table 26 and Table 28, MOUs have been steadily increasing. In the third quarter of 2003, nine of the 14 carriers (64%) surveyed posted average subscriber usage of more than 500 minutes per month versus 10 out of 17 (59%) in the third quarter of 2002.

As shown in Table 26, the all-digital operators generally have the highest MOUs. In particular, the CDMA carriers such as Sprint PCS and the Sprint PCS affiliates generally have higher usage than the other operators. We believe these operators are able to provide more usage to their customers because they have superior network capacity available from CDMA. U.S. Cellular has seen a robust 33% increase in MOUs year over year because of an increasing percentage of its customers using CDMA digital services. On August 7, 2002, for example, the company completed its acquisition of PrimeCo PCS, an all-digital CDMA operator in Chicago.

One notable exception is Triton PCS. With its UnPlan rate plan, customers can use unlimited local minutes plus a fixed number of off-network minutes for a fixed monthly price. This relatively new rate plan has led to a 56% increase year over year in MOUs to 836 from 535 in the third quarter of 2002.

Nextel and Nextel Partners both experience high usage because of their target market, high-end business users. Many of Nextel's and Nextel Partners' rate plans include unlimited Direct Connect minutes. Nextel and Nextel Partners are able to economically deliver unlimited Direct Connect minutes by leveraging the six-to-one capacity advantage of Direct Connect transmissions vis-à-vis analog calls.

Using the MOU data, in Table 27, we calculate the average effective price per minute (referred to as the pricing yield) by taking the ARPU (excluding roaming) and dividing by the average MOU per subscriber. In the table, we rank the operators from lowest to highest, given that the operators with the lower yields probably have less downside risk. The range in yields among the national operators is \$0.07-0.11 for the third quarter of 2003. We expect the range in pricing yields of the national operators to continue to narrow as Verizon Wireless and Cingular continue to experience higher usage among their respective subscriber bases.

**The range in yields among the national operators is \$0.07-0.11 for the third quarter of 2003**

All of the national providers had declines in revenue yield on a year-over-year basis. Verizon Wireless posted the largest year-over-year drop as it moved to \$0.10 from \$0.14. The smallest decline came from Nextel, which moved from \$0.11 in third quarter 2002 to \$0.10 in third quarter 2003. This is not surprising, as we would expect Nextel's customers to be the least price sensitive. The remaining national operators declined \$0.02 on a year-over-year basis.

In the affiliate and regional space, the largest declines came from Alamosa and Triton PCS. Triton PCS moved to \$0.07 from \$0.11. This shows that the company is already offering popular big bucket minute plans in its markets (such as its UnPlan service offerings). Moreover, because of its greatly reduced pricing yield, we believe Triton PCS may have limited downside risk to its ARPU. Triton PCS's UnPlan offers unlimited local calls (plus a limited number of roaming minutes) for a flat monthly fee.

In Table 28, we calculate the annual growth in MOU per average subscriber. As shown in the table, growth in usage remains robust for the most part despite the already high levels. We believe this is a function of the lower effective price per minute charged. However, we point out that growth is slowing down. In the third quarter of 2003, three of the six national operators had growth rates of less than 20%.

It is not surprising to us that Verizon Wireless has been at or near the top of this category for the past several quarters. The company is starting from a lower base usage level while it is also rapidly upgrading its subscriber base to digital from analog. Digital rate plans tend to include large buckets of minutes with an abundance of free off-peak minutes.

What is somewhat surprising is the continued strong year-over-year MOU growth by Sprint PCS. While the company's subscribers use roughly 840 minutes per month (tops among the national providers), the company's year-over-year MOU growth rate was a robust 27% in the third quarter of 2003, its highest such growth rate since the second quarter of 2002.

In Table 29, we calculate the annual change in the effective pricing yields. The pricing yields generally have been falling fairly significantly during the past year, as operators have offered competitive pricing plans that have included virtually unlimited night and weekend usage for free.

In the third quarter, Nextel experienced the smallest decrease in yield from a year ago for the national operators, with a 12.7% decline. In terms of the biggest year-over-year yield drops, Verizon Wireless continues to experience declines greater than 20% across the entire measurement period. This goes hand-in-hand with the phenomenon pointed out earlier. Namely, as the company has rapidly converted its base to digital from analog, these subscribers have been signing up for low-yielding big bucket minute plans in droves.

We believe that at the current effective yields, wireless pricing is competitive with traditional wireline pricing (especially relative to long-distance calling). This may help explain the strong wireless usage as the competitive pricing combined with the convenience of mobility continues to drive what is referred to as “wireline displacement.” Why use a pay phone, calling card, or hotel phone when prices are generally higher on a per-minute basis relative to wireless? Also, given that a large number of night and weekend minutes are now regularly included in wireless pricing schemes (some of which include free on-network long distance), it is often less expensive to use your wireless phone while in your home.

In terms of local number portability, we do not expect material cuts in service pricing in the consumer space. There will be promotional pricing by various operators in certain markets, but this is really business as usual. Over the past year, operators have generally kept pricing on their service plans fairly stable (while aggressively discounting handsets), and we expect this to continue.

We attribute the relative calm in the pricing environment to the maturing of the competitive landscape. The “new” entrants, such as T-Mobile, are not so new anymore. The smaller players have gained enough critical mass over the past few years that if they were to further lower pricing, they would run the risk of re-rating their customer bases, which would affect profitability (more than the potential benefit of increased market share).

On the other hand, we expect pricing in the enterprise space to show more meaningful declines over time. We believe pricing in the enterprise space for wireless service has not been nearly as competitive as it is for wireline services (in terms of the discounts given relative to retail). For instance, enterprises generating a lot of long distance traffic are given significantly lower per-minute rates (e.g., large volume discounts) than are available to the average consumer. This is not the case for wireless service.

We believe AT&T Wireless is the most exposed to re-pricing in the enterprise space, followed by Verizon Wireless (to a lesser degree). While Nextel also has strong exposure to the corporate space (roughly 20% of its customer base was enterprise and government as of the third quarter of 2003), we believe it is less exposed to re-pricing. Nextel offers a differentiated product and its Direct Connect minutes are typically unlimited. Also, it has been offering pooling of minutes across users for its corporate (and government) accounts for some time now. As a result, we believe its corporate and government plans are generally receiving volume discount pricing relative to what is available to consumers.

Finally, in Table 30, we calculate the price elasticity by relating the annual change in average MOU (see Table 28) to the annual change in pricing yield (see Table 29). In other words, the price elasticity measures the correlation between pricing and usage. The price elasticity of demand represents the multiplier (slope) applied to

the negative change in pricing to arrive at the change in usage. For example, if price per minute fell 10% and MOU per user increased 10%, the elasticity factor would be 100%.

Why is this metric important? Since ARPU is equal to subscriber usage (MOU) multiplied by price per minute (yield), the understanding of the correlation (and changing trends in this correlation) between usage and pricing could signal a trend in ARPU. Also, deterioration in ARPU (or the quality of ARPU) often shows up in the pricing elasticity metric.

The lower price per minute has driven much stronger subscriber usage for the industry overall. The question is when will this subside? As operators cut price per minute, will it create more subscriber usage, or will customers opt to get more minutes for the same price, or, even worse, use the same number of minutes but at a lower price? We believe ARPU is the most sensitive variable to our valuation analyses and, therefore, we will continue to closely monitor pricing elasticity trends.

With much of the digital conversion completed, we believe price elasticity on minutes of use will begin to moderate. Our rationale is as follows: since the bulk of the customer base at the end of the third quarter of 2003 is on a digital rate plan, customers will have significantly stepped up their usage levels. Usage will have increased because of the much better pricing per minute with the bucket minute plans relative to analog pricing. As a result, maintaining elasticities of 100% or greater for existing users will be more difficult, in our view.

**Table 26: MOU per Average Subscriber per Month (excluding roaming)**

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Sprint PCS	540	570	660	660	660	700	800	840
Nextel	590	590	650	650	640	650	720	740
T-Mobile	437	445	496	536	581	633	670	705
AT&T Wireless	400	430	482	484	507	509	551	553
Verizon Wireless	282	294	343	367	389	402	450	481
Cingular	352	355	398	399	406	405	445	456
<b>Affiliate Operators</b>								
Triton PCS	438	455	515	535	601	689	794	836
UbiquiTel	652	631	630	638	649	687	764	787
Nextel Partners	555	533	609	614	620	603	678	711
Alamosa PCS	440	445	442	436	458	510	534	574
AirGate PCS	570	775	825	845	725	800	875	NAV
Horizon PCS	498	498	543	557	551	615	NAV	NAV
<b>Regional Operators</b>								
Centennial PCS	524	566	595	619	727	741	826	894
Western Wireless	308	307	357	379	398	412	454	478
US Cellular	237	237	280	327	359	377	424	435
Centennial Cellular	183	192	218	241	254	251	272	292
Leap Wireless (Cricket)	1,150	1,230	1,175	1,160	1,280	1,350	NAV	NAV

Source: Company reports and UBS estimates

Table 27: Yield (ARPU [excluding roaming]/MOU [excluding roaming])

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Sprint PCS	\$0.11	\$0.10	\$0.10	\$0.10	\$0.09	\$0.08	\$0.08	\$0.07
T-Mobile	\$0.11	\$0.11	\$0.10	\$0.09	\$0.09	\$0.08	\$0.08	\$0.08
Nextel	\$0.12	\$0.11	\$0.11	\$0.11	\$0.11	\$0.10	\$0.10	\$0.10
Verizon Wireless	\$0.16	\$0.16	\$0.14	\$0.14	\$0.13	\$0.12	\$0.11	\$0.10
AT&T Wireless	\$0.15	\$0.14	\$0.13	\$0.13	\$0.12	\$0.12	\$0.11	\$0.11
Cingular	\$0.15	\$0.14	\$0.13	\$0.13	\$0.13	\$0.13	\$0.12	\$0.11
<b>Affiliate Operators</b>								
Triton PCS	\$0.13	\$0.12	\$0.11	\$0.11	\$0.09	\$0.08	\$0.07	\$0.07
UbiquiTel	\$0.09	\$0.09	\$0.09	\$0.09	\$0.09	\$0.08	\$0.08	\$0.07
Nextel Partners	\$0.13	\$0.13	\$0.11	\$0.11	\$0.11	\$0.11	\$0.10	\$0.10
Alamosa PCS	\$0.14	\$0.13	\$0.13	\$0.14	\$0.12	\$0.11	\$0.11	\$0.10
AirGate PCS	\$0.11	\$0.08	\$0.07	\$0.07	\$0.08	\$0.07	\$0.07	NAV
Horizon PCS	\$0.11	\$0.11	\$0.10	\$0.10	\$0.10	\$0.08	NAV	NAV
<b>Regional Operators</b>								
Centennial PCS	\$0.11	\$0.10	\$0.10	\$0.09	\$0.08	\$0.07	\$0.07	\$0.07
US Cellular	\$0.15	\$0.15	\$0.14	\$0.12	\$0.11	\$0.10	\$0.09	\$0.09
Western Wireless	\$0.14	\$0.14	\$0.12	\$0.12	\$0.11	\$0.11	\$0.10	\$0.11
Centennial Cellular	\$0.21	\$0.20	\$0.18	\$0.17	\$0.16	\$0.16	\$0.15	\$0.15
Leap Wireless (Cricket)	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	\$0.03	NAV	NAV

Source: Company reports and UBS estimates

**Table 28: Percentage Growth in MOU per Average Subscriber per Month**

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
T-Mobile	NAV	NAV	NAV	NAV	33.1%	42.3%	34.9%	31.6%
Verizon Wireless	34.9%	29.5%	30.9%	33.9%	37.9%	36.7%	31.2%	31.1%
Sprint PCS	28.6%	35.7%	37.5%	22.2%	22.2%	22.8%	21.2%	27.3%
AT&T Wireless	9.3%	21.8%	25.8%	24.4%	26.8%	18.4%	14.3%	14.3%
Cingular	NAV	38.1%	32.7%	23.9%	15.3%	14.1%	11.8%	14.3%
Nextel	22.9%	15.7%	12.1%	12.1%	8.5%	10.2%	10.8%	13.8%
<b>Affiliate Operators</b>								
Triton PCS	27.7%	31.5%	29.4%	28.0%	37.2%	51.4%	54.2%	56.3%
Alamosa PCS	15.5%	11.8%	19.5%	9.0%	4.1%	14.6%	20.8%	31.7%
UbiquiTel	70.0%	48.1%	40.0%	-19.1%	-0.5%	8.9%	21.3%	23.4%
Nextel Partners	11.4%	10.1%	9.5%	8.9%	11.7%	13.1%	11.3%	15.8%
AirGate PCS	44.3%	72.2%	56.3%	53.9%	27.2%	3.2%	6.1%	NAV
Horizon PCS	NAV	60.6%	40.7%	20.3%	10.6%	23.5%	NAV	NAV
<b>Regional Operators</b>								
Centennial PCS	4.8%	23.0%	27.7%	29.2%	38.7%	30.9%	38.8%	44.4%
US Cellular	34.7%	30.9%	30.2%	42.2%	51.5%	59.1%	51.4%	33.0%
Western Wireless	26.7%	21.8%	17.4%	27.2%	29.2%	34.2%	27.2%	26.1%
Centennial Cellular	28.0%	33.3%	38.9%	42.6%	38.8%	30.7%	24.8%	21.2%
Leap Wireless (Cricket)	NAV	NAV	NAV	NAV	11.3%	9.8%	NAV	NAV

Source: Company reports and UBS estimates

**Table 29: Percentage Change in Yield**

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Nextel	-23.1%	-17.8%	-11.9%	-9.7%	-8.1%	-9.8%	-12.6%	-12.7%
AT&T Wireless	-15.8%	-23.2%	-24.8%	-22.2%	-22.1%	-15.4%	-12.2%	-13.0%
Cingular	NAV	-27.5%	-25.2%	-20.8%	-14.3%	-12.8%	-11.1%	-14.8%
T-Mobile	NAV	NAV	NAV	NAV	-23.1%	-26.2%	-20.3%	-18.9%
Sprint PCS	-20.9%	-24.9%	-25.4%	-16.9%	-16.3%	-20.3%	-19.2%	-21.9%
Verizon Wireless	-27.8%	-23.6%	-24.6%	-24.6%	-23.1%	-24.6%	-22.9%	-23.3%
<b>Affiliate Operators</b>								
Nextel Partners	-12.8%	-12.4%	-11.9%	-12.0%	-13.0%	-15.6%	-13.0%	-12.8%
UbiquiTel	-40.9%	-27.5%	-26.0%	17.6%	-4.6%	-14.5%	-17.5%	-18.9%
Alamosa PCS	-18.8%	-12.1%	-20.3%	-12.6%	-8.7%	-18.7%	-20.0%	-27.8%
Triton PCS	-27.1%	-26.9%	-25.1%	-23.3%	-32.8%	-36.6%	-37.2%	-36.5%
AirGate PCS	-29.5%	-41.8%	-39.0%	-33.9%	-24.3%	-13.4%	-5.9%	NAV
Horizon PCS	NAV	-34.2%	-27.6%	-19.8%	-14.4%	-24.8%	NAV	NAV
<b>Regional Operators</b>								
Western Wireless	-29.3%	-28.0%	-22.4%	-24.1%	-22.2%	-19.6%	-14.5%	-10.3%
Centennial Cellular	-30.9%	-29.6%	-29.2%	-30.4%	-26.6%	-22.0%	-17.5%	-11.1%
US Cellular	-26.8%	-20.5%	-20.5%	-24.0%	-28.1%	-34.9%	-32.6%	-23.6%
Centennial PCS	-25.8%	-34.8%	-28.9%	-23.6%	-30.5%	-27.8%	-31.7%	-30.9%
Leap Wireless (Cricket)	NAV	NAV	NAV	NAV	-12.9%	-4.7%	NAV	NAV

Source: Company reports and UBS estimates

Table 30: Elasticity

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
T-Mobile	NAV	NAV	NAV	NAV	143.5%	161.5%	172.0%	167.4%
Verizon Wireless	125.5%	125.0%	125.9%	137.9%	164.3%	149.2%	136.0%	133.4%
Sprint PCS	136.5%	143.2%	147.7%	131.7%	136.6%	112.6%	110.6%	124.6%
AT&T Wireless	58.7%	94.2%	104.3%	110.2%	120.8%	119.5%	117.0%	109.3%
Nextel	99.2%	88.3%	101.8%	124.0%	104.2%	104.0%	85.4%	109.0%
Cingular	NAV	138.8%	129.7%	114.9%	107.4%	110.2%	106.8%	96.8%
<b>Affiliate Operators</b>								
Triton PCS	102.2%	117.1%	117.0%	120.3%	113.6%	140.4%	145.5%	154.0%
UbiquiTel	171.2%	175.1%	153.7%	108.8%	-10.1%	61.3%	121.3%	123.4%
Nextel Partners	89.7%	81.6%	80.1%	74.1%	89.8%	84.4%	87.4%	123.1%
Alamosa PCS	82.3%	98.0%	95.7%	71.3%	46.8%	78.3%	103.9%	113.7%
AirGate PCS	150.1%	172.6%	144.1%	158.8%	111.7%	24.0%	103.0%	NAV
Horizon PCS	NAV	177.2%	147.3%	102.6%	74.0%	94.7%	NAV	NAV
<b>Regional Operators</b>								
Centennial Cellular	90.5%	112.6%	133.2%	139.9%	145.7%	139.7%	141.8%	190.8%
Centennial PCS	18.6%	66.3%	95.9%	123.8%	126.9%	111.2%	122.4%	143.9%
US Cellular	129.5%	150.6%	147.1%	175.5%	183.4%	169.2%	157.6%	139.8%
Western Wireless	91.1%	77.9%	77.7%	113.0%	131.7%	174.2%	186.8%	NM
Leap Wireless (Cricket)	NAV	NAV	NAV	NAV	88.0%	206.1%	NAV	NAV

Source: Company reports and UBS estimates

## **Operating Cost Metrics (Including CCPU and CPGA)**

We simplified the presentation of operating costs to show only the key metrics: non-marketing cash costs per user (CCPU); selling and marketing costs per gross addition (CPGA); and total monthly cash costs per average subscriber (which includes the selling and marketing and non-marketing cash costs). Because of the accounting differences among operators, we thought further delineation of the operating costs (i.e., cost of service, general, and administrative) was misleading.

At this point, we believe most operators include the equipment subsidies related to existing customers (referred to as “retention costs”) in their calculating of CCPU. It can be argued that the “retention costs” are related to existing customers—not new customers—and, therefore, are more closely tied to the average subscriber base rather than to the gross additions. For this reason, we believe retention costs should be included in the CCPU calculation rather than in the CPGA figure.

An exception to this rule is Western Wireless. Western includes handset subsidies incurred in retaining existing subscribers in subscriber acquisition costs. According to the company’s 10-Q, these retention costs had a \$63 and \$51 impact on CPGA for the three months ended September 30, 2003 and 2002, respectively, and a \$61 and \$50 impact on CPGA for the nine months ended September 30, 2003 and 2002, respectively.

In Table 31, we rank the companies by monthly CCPU. The non-marketing cash cost per subscriber excludes the total selling and marketing costs from the calculation. Essentially, the result is the total monthly cash costs (service revenues less EBITDA) less total selling and marketing costs (CPGA times gross additions).

Operators with higher ARPU than their non-marketing cash costs per user are EBITDA-positive before marketing, otherwise known as EBITDAM-positive. This metric highlights operators that are effectively leveraging their fixed expenses.

For CCPU, T-Mobile has led the pack among the national operators over the entire measurement period, as shown in Table 31 (CCPU figures are not available for Cingular Wireless and Verizon Wireless). We believe this is due to several factors. First, T-Mobile does not sell dual-band handsets and, accordingly, does not allow off-network analog roaming (i.e., roaming on other operators’ analog networks where T-Mobile does not have access to GSM service). While this may negatively impact customer satisfaction (and thereby contribute to T-Mobile’s higher churn rate), it does help to reduce operating costs. Also, T-Mobile still has a relatively high component of its subscriber base

on prepaid plans (although this figure has been coming down). While this also contributes to T-Mobile's higher churn rate, it should result in lower overall operating costs (i.e., little billing and bad debt costs).

For the past eight quarters, Nextel has had the second-lowest CCPU of the national operators (and the lowest in one quarter). Nextel does not allow off-network analog roaming, but it does allow digital roaming on its affiliate's (Nextel Partners) network. However, Nextel's network coverage (including Nextel Partners) is more extensive than T-Mobile's footprint (see Table 2) and, therefore, we do not believe Nextel's lack of analog roaming affects its churn rate to any measurable degree (See Table 13). However, we believe Nextel's lower roaming expenses contribute to its better ranking for the CCPU metric than either AT&T Wireless or Sprint PCS (both of which have much higher subscriber bases than Nextel).

Additionally, Nextel benefits from the low cost associated with its Direct Connect service offering. Nextel does not have to pay any interconnect fees for the minutes over its Direct Connect service. Finally, with multiple customers per account, we believe Nextel has lower overall customer billing service costs on a per-average subscriber basis.

Notwithstanding a couple of exceptions, monthly CCPU has been declining on a year-over-year basis, particularly for the national and affiliate operators. However, we have seen two consecutive quarters of sequential upticks in CCPU figures for the national providers and three consecutive quarters of sequential upticks in CCPU figures for the regional providers. We believe this is consistent with seasonally higher usage levels (and ARPUs) in the second and third quarters compared with the first quarters.

Moreover, as we noted earlier, we believe increased retention efforts by wireless carriers negatively affected this metric in the past two quarters. Namely, carriers have been aggressively courting customers to sign fresh two-year service agreements (in advance of wireless local number portability) by offering perquisites such as discounted new handsets. Again, these retention expenses are booked in CCPU by most carriers.

In Table 32, we show bad debt expense, which is a component of CCPU for the carriers that report it. Over the past couple of quarters, most carriers have seen improvements on a both year-over-year and a sequential basis. Two exceptions were AT&T Wireless and Sprint PCS, whose bad debt levels returned to more "normal" averages in terms of percentages of service revenues in the third quarter of 2003 when compared with the second quarter of 2003 (as discussed below).

**Namely, carriers have been courting customers to sign fresh two-year contracts (in advance of local number portability) by offering perquisites such as discounted new handsets**

We believe there are a number of factors for the improvement in bad debt. First, despite shaky subscriber results in 2002, we believe the carriers have either tightened credit or have "stuck to their guns" when it came to evaluating potential subscribers' credit scores. Accordingly, the operators are not faced

with bad debt problems that might have cropped up if carriers had loosened credit standards to invigorate subscriber results. Second, we believe that in some cases the second quarter 2003 bad debt figures may represent true-ups from previous quarters where bad debt was over-reserved for and, subsequently, was collected.

Looking ahead, we believe bad debt expense could increase as a result of LNP, primarily since operators are obligated to fulfill legitimate porting requests to another operator even if the final bill has not yet been settled. However, if customers skip out on the final bill, or the contract termination fee, the operator will know how to get in touch with them if the number was ported. Also, we believe the FCC will be forced to re-examine its decision for requiring operators to port a number before the final bill is settled if it turns out that there is a surge in customers skipping out on their bills, or on their contract termination fees. Generally, we have already incorporated higher bad debt percentages in our projections, since we believe the low bad debt levels that have been reported by certain operators in 2003 may not be sustainable.

In Table 33, we rank bad debt expense as a percentage of total service revenues for the operators on which we have data. Sprint PCS's bad debt expense of 2.6% of service revenues, while commendable when looking at its long-term trend, was up sequentially. During 2003, Sprint PCS and the Sprint PCS affiliates have seen bad debt expense as a percentage of total service revenue decline as a result of the reinstatement of deposits on its Clear Pay products.

Nextel has made extraordinary progress on this metric as well. AT&T Wireless's bad debt expense continues to be higher than most operators that report the metric.

In Table 34, we rank bad debt expense per average subscriber per month. We use this metric to quantify the cost side benefits these companies are accruing to help offset any weakness in ARPU.

In Table 35, we rank the operators according to total acquisition costs per gross addition. This calculation encompasses all selling and marketing costs, including the equipment (handset) subsidies, expressed on a per gross addition basis. Most figures exclude the retention costs (i.e., handset subsidies for existing customers) from this calculation and include these costs in the CCPU figures.

We believe CPGA has remained stubbornly high for the wireless industry for a number of reasons. First, one area in which carriers have been promotional is the handset pricing side. Many carriers are offering bargains on cutting-edge handsets to new customers instead of slashing service pricing.

We believe the operators view this as a better alternative to offering upfront promotional service pricing for two reasons. First, offering a heavy phone subsidy up-front entails taking a one-time hit instead of being subjected to discounted service pricing over the life of a customer. And, the customer life is increasingly measured by two-year contracts instead of the historical one-year

service agreement. Second, offering promotional pricing as a way to entice new customers sometimes leads to repricing the carrier's existing subscriber base.

The second reason why we believe CPGA has been high is that carriers are still trying to drive more sales through their direct stores. While operators indicated that these customers churn less frequently and have higher ARPU levels, costs to open these new stores most likely inflated third quarter CPGA levels. Once operators near completion of their optimal direct store count, we should start to see CPGA decline as the fixed costs associated with the company-owned stores are leveraged.

Similar to the other metrics presented, we believe this ratio should not be considered in isolation. It is more meaningful when compared among operators in combination with churn rates and ARPU levels (or LRPS). For example, all other things being equal, operators would typically be willing to spend more up-front marketing dollars to attract a high ARPU user rather than a low ARPU subscriber. An example of this would be Nextel, which has one of the highest CPGAs, but also one of the highest ARPUs.

Also, a company's churn rate plays an important role in how much it should spend to add a customer. Generally speaking, a prepaid customer is not as stable as a post-paid customer (prepaid subscribers generally have much higher churn rates) and, therefore, marketing costs associated with prepaid customers should be lower to reflect their potentially higher churn rate and a correspondingly shorter period needed to recoup the up-front investment. For example, in its most recent 10-Q filing, Cincinnati Bell indicated that the CPGA of its prepaid product was \$42 versus \$388 for its postpaid offering.

So, while we believe CPGA has remained stubbornly high in 2003, the average customer life (as measured by churn) has increased. While we certainly would like to see CPGA decrease (possibly through reductions in advertising expenses, for example), as long as the customer's average lifetime period is increasing, carriers may argue that investing in acquisition costs is worth it.

In Table 35, we calculate the year-over-year changes in CPGA for each of the segments we track. For the national providers, we have seen five consecutive quarters of increasing CPGA. As we have said in the past, we still believe advertising expense continues to weigh very heavily on CPGA.

The introduction of push-to-talk products, such as Verizon Wireless's in the third quarter of 2003, has already created an advertising competition between Nextel and Verizon Wireless. (Looking ahead, Sprint PCS unveiled its Ready Link product on November 17 and ALLTEL has a product under development, which could have a future impact on advertising as those products are launched.) Moreover, during the summer Sprint PCS began an advertising campaign aimed solely at AT&T Wireless, possibly in advance of wireless local number portability. The ads claim that while "lots of businesses think AT&T Wireless is

the obvious choice," Sprint PCS offers a wider coverage area, clearer calls, and faster data transfers to phones and laptops.

As shown in Table 35, for the second consecutive quarter AT&T Wireless lowered its CPGA on both a year-over-year and a sequential basis. AT&T Wireless's CPGA was down to \$335 in the third quarter of 2003, compared with \$376 in the third quarter 2002 and \$379 in the second quarter 2003. We believe AT&T Wireless benefited from a number of factors in the third quarter relative to its CPGA spending. First, the company increased sales through its own channels. In the third quarter of 2003, AT&T Wireless sold about 63% of its gross additions through its own stores versus roughly 57% in the third quarter of 2002. In the first and second quarters of 2003, these figures were 58% and 60%, respectively. By increasing direct sales, the company is able to leverage fixed selling costs over a higher number of gross adds. Sales through indirect channels incur costs that are more variable in nature (i.e., commissions).

Also positively affecting CPGA was AT&T Wireless's efforts to sell more GoPhone, a low-cost acquisition product. Finally, AT&T Wireless specifically cited that selling lower-cost GSM handsets contributed to its improved CPGA. On the flipside, we believe increased spending on advertising negatively affected AT&T Wireless's CPGA.

On both a year-over-year and sequential basis, Sprint PCS had the largest increases at 18% and 12%, respectively. On an absolute dollar basis, Sprint PCS had the largest sequential move at \$50, going from \$415 in the second quarter of 2003 to \$465 in the third quarter of 2003. During the quarter, PCS booked a \$27 million inventory write-down, which accounted for about \$19 of the higher CPGA. Moreover, we believe CPGA also increased because of additional costs incurred from new stores added over the past year without volumes to spread these fixed costs over. T-Mobile also had slightly higher CPGAs relative to a year earlier and relative to the second quarter of 2003.

While many of the affiliates saw year-over-year declines in CPGA, they all saw sequential increases from the second quarter of 2003 aside from Nextel Partners. AirGate PCS had the best year-over-year decrease, going from \$496 in the third quarter of 2002 to \$396 in the third quarter of 2003. Alamosa had the largest absolute dollar sequential increase going to \$446 in the third quarter of 2003 from \$422 in the second quarter of 2003.

As for the regional operators, ALLTEL posted a nice sequential decrease in CPGA moving to \$305 in the third quarter of 2003 from \$322 in the second quarter of 2003. ALLTEL's third quarter 2002 CPGA was \$310.

In Table 36, we show the total monthly average cash costs (including total selling and marketing costs) per average subscriber per month. This calculation is simply the total service revenues less the EBITDA, divided by the average number of subscribers (divided by three for the number of months in the quarter). This metric represents the cash costs necessary to support the existing base, as well as grow it (since it incorporates the costs of acquiring new subscribers).

Companies that are EBITDA positive have higher ARPUs than their monthly average cash costs per subscriber. Additionally, we believe this metric is comparable across all operators because it normalizes for any difference in reporting methodology between cost categories.

Generally speaking, the operators with the highest penetration rates typically have among the lowest monthly cash costs per average subscriber. We believe this is due to two factors. First, the operators have a larger subscriber base over which to spread their fixed network and general and administrative expenses. Second, these operators are generally growing their subscriber bases at slower rates and, therefore, selling and marketing costs per average subscriber are lower than for an operator that is still ramping up its subscribers. We believe that as the new entrants' growth rates continue to moderate, their cash costs will more closely resemble those of the more developed operators.

A good example of this belief is T-Mobile. The company's second quarter 2003 CCPU dropped 10.8% over its year-ago level (\$38.01 versus \$42.63 a year ago). This is the largest year-over-year drop among the national operators.

As shown in Table 36, Verizon Wireless has led the national carriers in this metric over the entire measurement period. All the national carriers, as well as the affiliates, posted year-over-year declines in this metric.

**Table 31: Non-Marketing Cash Cost per User per Month (CCPU)**

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
T-Mobile	\$26.49	\$25.34	\$23.76	\$21.85	\$22.41	\$22.15	\$22.17	\$23.41
Nextel	\$28.73	\$28.25	\$26.52	\$25.91	\$25.39	\$24.87	\$25.11	\$26.44
Sprint PCS	\$34.28	\$31.37	\$32.54	\$33.27	\$31.51	\$30.31	\$30.56	\$30.94
AT&T Wireless	\$33.25	\$31.16	\$31.69	\$32.55	\$32.24	\$30.88	\$32.09	\$32.48
<b>National Weighted Average</b>	\$31.72	\$29.83	\$29.78	\$29.80	\$29.07	\$28.00	\$28.47	\$29.14
<b>Year over Year Change (%)</b>	-8.9%	-8.3%	-8.4%	-9.1%	-8.4%	-6.1%	-4.4%	-2.2%
<b>Affiliate Operators</b>								
Triton PCS	\$41.19	\$38.91	\$40.69	\$41.75	\$39.92	\$37.96	\$37.50	\$38.83
UbiquiTel	\$76.02	\$61.90	\$68.74	\$65.31	\$54.22	\$46.40	\$46.35	\$42.32
Nextel Partners	\$59.41	\$55.77	\$52.70	\$49.24	\$45.33	\$43.28	\$43.36	\$43.35
Alamosa PCS	\$64.21	\$51.91	\$53.20	\$55.96	\$51.01	\$43.87	\$42.89	\$43.84
US Unwired	\$69.66	\$72.59	\$63.30	\$67.10	\$61.07	\$49.77	\$50.26	\$48.34
AirGate PCS	\$63.78	\$54.34	\$53.52	\$66.05	\$53.48	\$43.56	\$47.29	\$52.70
Horizon PCS	\$82.69	\$72.48	\$75.84	\$80.06	\$75.39	\$62.53	\$65.79	NAV
<b>Affiliate Weighted Average</b>	\$60.21	\$55.11	\$54.51	\$56.30	\$50.92	\$44.81	\$45.24	\$43.98
<b>Year over Year Change (%)</b>	-13.1%	-13.1%	-15.2%	-10.9%	-15.4%	-18.7%	-17.0%	-19.3%
<b>Regional Operators</b>								
Rural Cellular	\$21.19	\$17.84	\$18.86	\$18.15	\$17.24	\$18.14	\$19.60	\$19.37
Leap Wireless (Cricket)	\$30.78	\$23.12	\$20.49	\$21.13	\$19.81	\$23.59	\$22.45	\$19.86
Centennial PCS	\$22.16	\$23.29	\$23.66	\$23.70	\$19.73	\$19.77	\$19.32	\$20.10
Cincinnati Bell	\$19.74	\$21.00	\$21.97	\$20.89	\$22.53	\$19.93	\$20.14	\$20.86
Alltel	\$19.47	\$19.10	\$20.63	\$20.92	\$20.93	\$20.14	\$20.83	\$21.64
Centennial Cellular	\$22.53	\$20.30	\$19.74	\$20.87	\$19.91	\$19.59	\$19.95	\$23.03
US Cellular	\$20.86	\$20.71	\$21.94	\$24.50	\$23.79	\$24.19	\$25.49	\$24.32
Western Wireless	\$24.16	\$22.85	\$22.89	\$23.89	\$20.78	\$21.33	\$22.71	\$24.85
Century Telephone	\$17.79	NAV						
<b>Regional Weighted Average</b>	\$21.00	\$20.27	\$21.10	\$21.95	\$21.34	\$21.44	\$22.15	\$22.28
<b>Year over Year Change (%)</b>	-6.5%	-10.3%	-6.0%	-2.5%	-3.8%	5.8%	5.0%	1.5%

Notes: Year-over-year comparison calculations are based on current data. Therefore, the historical data comparisons have been adjusted to account for fewer data points in the present data.

(1) Includes retention costs (for AirGate PCS, the retention costs have been included for second quarter 2002 and beyond and for T-Mobile the retention costs have been included for first quarter 2003 and beyond).

Source: Company reports and UBS estimates

**Table 32: Bad Debt Expense (in thousands)**

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Nextel	89,844	93,072	80,595	86,496	74,000	56,000	25,000	20,000
Sprint PCS	137,950	131,008	156,936	208,362	97,632	88,410	55,728	76,820
AT&T Wireless	166,000	159,000	141,000	114,000	137,000	137,000	119,000	139,000
<b>Affiliate Operators</b>								
UbiquiTel	6,000	6,400	7,300	5,900	1,900	1,100	1,500	100
Alamosa PCS	12,000	8,200	11,100	13,500	7,520	6,500	3,500	1,100
AirGate PCS	5,613	6,045	5,184	4,505	2,185	(31)	1,570	1,476
Triton PCS	3,126	2,547	3,276	5,330	7,736	2,516	1,757	2,193
<b>Regional Operators</b>								
Rural Cellular	4,500	2,500	1,200	2,000	2,300	1,900	2,400	2,300
US Cellular	7,900	8,100	13,400	19,300	22,900	17,200	16,300	11,700
<b>Total Bad Debt Expense</b>	<b>432,933</b>	<b>416,872</b>	<b>419,991</b>	<b>459,393</b>	<b>353,173</b>	<b>310,595</b>	<b>226,755</b>	<b>254,689</b>
<b>Quarter-over-Quarter Change in Bad Debt Expense</b>	<b>17.2%</b>	<b>-3.7%</b>	<b>0.7%</b>	<b>9.4%</b>	<b>-23.1%</b>	<b>-12.1%</b>	<b>-27.0%</b>	<b>12.3%</b>
<b>Year-over-Year Change in Bad Debt Expense</b>			<b>43.6%</b>	<b>22.8%</b>	<b>-18.4%</b>	<b>-25.5%</b>	<b>-46.0%</b>	<b>-44.6%</b>

Source: Company reports and UBS estimates

**Table 33: Bad Debt Expense as a Percentage of Total Service Revenues**

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Nextel	5.1%	5.1%	4.0%	4.0%	3.4%	2.5%	1.0%	0.8%
Sprint PCS	5.7%	5.1%	5.8%	7.4%	3.5%	3.3%	1.9%	2.6%
AT&T Wireless	5.1%	4.7%	3.9%	3.0%	3.7%	3.7%	3.0%	3.4%
<b>Affiliate Operators</b>								
UbiquiTel	14.4%	14.7%	14.1%	10.0%	3.3%	2.0%	2.4%	0.1%
Alamosa PCS	10.7%	6.8%	8.8%	9.5%	5.3%	4.8%	2.3%	0.7%
Triton PCS	2.2%	1.7%	1.9%	2.9%	4.6%	1.4%	0.9%	1.1%
AirGate PCS	8.8%	8.3%	6.6%	5.3%	2.8%	0.0%	1.9%	1.7%
<b>Regional Operators</b>								
Rural Cellular	4.4%	2.5%	1.0%	1.7%	2.2%	1.7%	2.0%	1.8%
US Cellular	1.7%	1.8%	2.7%	3.4%	4.0%	3.0%	2.7%	1.9%

Source: Company reports and UBS LLC estimate

**Table 34: Bad Debt Expense per Average Subscriber per Month**

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Nextel	\$3.56	\$3.48	\$2.86	\$2.92	\$2.38	\$1.72	\$0.73	\$0.56
Sprint PCS	\$3.54	\$3.14	\$3.62	\$4.77	\$2.22	\$1.99	\$1.23	\$1.66
AT&T Wireless	\$3.13	\$2.82	\$2.38	\$1.89	\$2.23	\$2.18	\$1.86	\$2.14
<b>Affiliate Operators</b>								
UbiquiTel	\$12.70	\$11.10	\$11.70	\$8.71	\$2.58	\$1.38	\$1.77	\$0.11
Alamosa PCS	\$9.03	\$5.17	\$6.68	\$7.82	\$4.19	\$3.44	\$1.74	\$0.54
Triton PCS	\$1.60	\$1.21	\$1.47	\$2.28	\$3.17	\$0.99	\$0.67	\$0.83
AirGate PCS	\$7.13	\$6.53	\$5.04	\$4.48	\$2.11	(\$0.03)	\$1.45	\$1.36
<b>Regional Operators</b>								
US Cellular	\$0.77	\$0.78	\$1.27	\$1.70	\$1.91	\$1.37	\$1.27	\$0.91
Rural Cellular	\$2.29	\$1.24	\$0.58	\$0.95	\$1.08	\$0.87	\$1.09	\$1.04

Source: Company reports and UBS estimates

**Table 35: Total Acquisition Cost per Gross Add (CPGA)**

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
T-Mobile (1)	\$326	\$292	\$311	\$322	\$323	\$303	\$332	\$334
AT&T Wireless (1)	\$344	\$367	\$383	\$376	\$383	\$404	\$379	\$335
Nextel (1)	\$468	\$460	\$440	\$460	\$440	\$450	\$460	\$450
Sprint PCS (1)	\$315	\$305	\$350	\$395	\$370	\$365	\$415	\$465
<b>National Weighted Average</b>	\$349	\$347	\$367	\$378	\$372	\$372	\$391	\$384
<b>Year over Year Change (%)</b>	-8.5%	-0.7%	7.4%	11.6%	6.6%	7.3%	6.4%	1.5%
<b>Affiliate Operators</b>								
US Unwired	\$362	\$330	\$385	\$378	\$342	\$297	\$354	\$373
AirGate PCS (1)	\$343	\$313	\$430	\$496	\$371	\$282	\$390	\$396
Nextel Partners (1)	\$480	\$466	\$459	\$446	\$448	\$411	\$445	\$444
Alamosa PCS	\$326	\$340	\$402	\$441	\$403	\$385	\$422	\$446
Triton PCS (1)	\$400	\$446	\$418	\$418	\$408	\$406	\$440	\$451
UbiquiTel	\$369	\$413	\$456	\$474	\$435	\$432	\$452	\$466
Horizon PCS	\$340	\$342	\$364	\$365	\$316	\$319	\$359	NAV
<b>Affiliate Weighted Average</b>	\$375	\$381	\$420	\$431	\$395	\$369	\$417	\$433
<b>Year over Year Change (%)</b>	-13.5%	-5.7%	3.1%	17.0%	5.5%	-3.0%	-0.9%	-0.8%
<b>Regional Operators</b>								
Cincinnati Bell	\$265	\$216	\$218	\$177	\$164	\$146	\$199	\$164
Leap Wireless (Cricket) (1)	\$246	\$246	\$316	\$312	\$277	\$208	\$252	\$168
Centennial PCS	\$275	\$217	\$261	\$288	\$287	\$260	\$285	\$260
Centennial Cellular	\$346	\$273	\$334	\$366	\$365	\$284	\$268	\$261
Alltel	\$305	\$316	\$321	\$310	\$274	\$285	\$322	\$305
Western Wireless	\$487	\$455	\$436	\$407	\$399	\$391	\$389	\$393
Rural Cellular	\$325	\$318	\$343	\$411	\$417	\$416	\$426	\$401
US Cellular (1)	\$357	\$362	\$386	\$348	\$369	\$358	\$378	\$405
Qwest	\$285	\$314	\$248	\$229	NAV	NAV	NAV	NAV
Century Telephone	\$304	NAV						
<b>Regional Weighted Average</b>	\$305	\$305	\$327	\$320	\$312	\$299	\$330	\$308
<b>Year over Year Change (%)</b>	1.8%	10.4%	4.2%	9.2%	-3.0%	-1.3%	-1.6%	-5.7%

Notes: Year-over-year comparison calculations are based on current data. Therefore, the historical data comparisons have been adjusted to account for fewer data points in the present data.

(1) Excludes retention costs (for AirGate PCS, the retention costs have been included for second quarter 2002 and beyond and for T-Mobile the retention costs have been included for first quarter 2003 and beyond).

Source: Company reports and UBS estimates

**Table 36: Monthly Average Cash Cost per Subscriber per Month**

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Verizon Wireless	\$31.24	\$28.86	\$30.30	\$30.62	\$29.70	\$29.16	\$30.16	\$29.96
Cingular	\$36.01	\$33.76	\$35.07	\$36.62	\$36.82	\$32.43	\$33.77	\$37.11
T-Mobile	\$52.66	\$44.96	\$42.63	\$46.44	\$45.35	\$40.24	\$38.01	\$40.76
Nextel	\$48.31	\$46.54	\$43.11	\$42.56	\$41.75	\$40.05	\$40.42	\$40.81
AT&T Wireless	\$48.55	\$44.93	\$43.57	\$44.71	\$45.82	\$41.82	\$43.07	\$42.79
Sprint PCS	\$52.73	\$45.82	\$45.22	\$47.75	\$46.56	\$43.19	\$43.92	\$45.25
<b>National Weighted Average</b>	\$41.36	\$38.04	\$38.03	\$39.27	\$38.94	\$36.12	\$36.82	\$37.81
<b>Year over Year Change (%)</b>	-7.0%	-5.5%	-4.4%	-3.9%	-5.9%	-5.1%	-3.2%	-3.7%
<b>Affiliate Operators</b>								
Triton PCS	\$62.99	\$54.40	\$57.44	\$57.02	\$55.54	\$51.60	\$49.81	\$50.52
Alamosa PCS	\$99.39	\$73.80	\$72.06	\$79.55	\$72.96	\$62.75	\$59.40	\$61.48
Nextel Partners	\$94.61	\$86.95	\$81.25	\$75.08	\$69.28	\$63.17	\$63.61	\$62.31
US Unwired	\$104.26	\$97.14	\$83.92	\$87.15	\$80.88	\$65.94	\$63.49	\$62.32
UbiquiTel	\$127.64	\$95.76	\$99.10	\$99.63	\$84.09	\$70.48	\$68.72	\$65.03
AirGate PCS	\$99.70	\$77.45	\$73.39	\$89.86	\$73.35	\$54.92	\$61.30	\$65.27
Horizon PCS	\$124.20	\$100.26	\$94.06	\$97.77	\$98.36	\$81.85	\$81.45	NAV
<b>Affiliate Weighted Average</b>	\$93.41	\$78.96	\$75.91	\$78.25	\$72.00	\$62.09	\$61.43	\$60.00
<b>Year over Year Change (%)</b>	-24.9%	-21.4%	-22.2%	-19.1%	-22.9%	-21.4%	-19.1%	-21.9%
<b>Regional Operators</b>								
Cincinnati Bell	\$32.18	\$26.84	\$28.30	\$25.00	\$27.80	\$24.03	\$24.89	\$25.21
Rural Cellular	\$30.46	\$25.50	\$26.93	\$27.54	\$27.70	\$27.03	\$28.05	\$27.67
Leap Wireless (Cricket)	\$73.97	\$48.58	\$39.71	\$38.50	\$31.71	\$32.06	\$31.10	\$28.08
Centennial Cellular	\$33.05	\$29.99	\$26.83	\$28.23	\$27.05	\$28.25	\$26.17	\$30.31
Alltel	\$28.24	\$28.04	\$29.42	\$29.38	\$29.09	\$28.30	\$29.82	\$30.65
Dobson Communications	\$37.51	\$35.15	\$36.68	\$36.18	\$33.86	\$30.30	\$29.56	\$30.94
Centennial PCS	\$35.93	\$39.87	\$37.69	\$38.84	\$34.01	\$33.60	\$31.73	\$32.45
US Cellular	\$30.34	\$29.55	\$30.65	\$34.76	\$36.53	\$34.93	\$34.86	\$33.62
Western Wireless	\$38.01	\$32.48	\$34.09	\$35.32	\$32.00	\$31.12	\$33.66	\$36.51
Century Telephone	\$27.29	\$17.19	\$24.64	NAV	NAV	NAV	NAV	NAV
<b>Regional Weighted Average</b>	\$33.15	\$30.42	\$31.15	\$32.26	\$31.51	\$30.44	\$31.07	\$31.32
<b>Year over Year Change (%)</b>	-13.9%	-4.9%	-3.9%	-7.1%	-9.0%	-5.4%	-4.5%	-2.9%

Note: Year-over-year comparison calculations are based on current data. Therefore, the historical data comparisons have been adjusted to account for fewer data points in the present data.

Source: Company reports and UBS estimates

## Operating Cash Flow (EBITDA/EBITDAM)

In Table 37, we show the absolute levels of EBITDA for our wireless universe; in Table 38, we calculate the EBITDA margin as a percentage of service revenues. We also detail the operating cash flow margin before marketing (EBITDAM) in Table 39. Other metrics presented include annual EBITDA growth (see Table 40) for operators that have been EBITDA-positive for at least a year and EBITDA per average subscriber per month. (See Table 41.)

Table 37 and Table 40 show that, in aggregate, EBITDA is continuing to ramp up across all segments (national, affiliate, and regional operators). As shown in Table 37, industry EBITDA for the carriers we track was approximately \$8.2 billion (or about \$32.8 billion on an annualized basis) in the third quarter of 2003. This represented a 24% annual increase over the industry EBITDA posted in the third quarter of 2002 for these same operators. The national operators generated approximately \$6.9 billion in EBITDA in the third quarter of 2003 (up about 22.6% from the year-ago level). The national operators' EBITDA represented about 84.3% of the total industry EBITDA in the most recent quarter.

The affiliate segment showed the most growth quarter over quarter, as these operators are, for the most part, continuing to report positive EBITDA after passing the breakeven point in late 2002/early 2003. This is the third quarter in a row in our survey that all six of the publicly traded affiliates we track reported positive EBITDA. It looks as if 2003 is the inflection point for free cash flow among the national providers and EBITDA for the affiliates.

Most operators saw year-over-year increases in EBITDA margins, but fewer operators saw sequential increases. For example, 17 of the 21 carriers we track for this metric reported annual increases in EBITDA margins but only 12 carriers saw sequential increases from second quarter 2003 to third quarter 2003. As shown in Table 38, the national operators increased the group's EBITDA margin by 2.7% year over year, but saw a sequential decline of 0.8% from second to third quarter 2003. The national providers' margin was 33.9% for the third quarter of 2003, versus 34.7% in the second quarter of 2003 and 31.2% in the year-ago period. We believe a reason for the sequential drop in margins could be due to increased spending in anticipation of LNP. Carriers focused intensely and spent aggressively on customer care and retention during the quarter, which could have negatively affected margins.

In the third quarter of 2003, Verizon Wireless became the second national carrier to post 40%-plus EBITDA margins, reporting 40.1% (versus 38.7% in the second quarter of 2003 and 38.4% in the third quarter of 2002). Prior to the third quarter of 2003, Nextel had been the only operator to post EBITDA margins above 40%. Nextel continues to post strong results with a margin of 43.4% in the third quarter of 2003, versus 42.1% in the second quarter of 2003

and 41.0% in the year-ago period. We believe Nextel's strong EBITDA margins are particularly impressive given their more diminutive size relative to the other national carriers (i.e., it is the second smallest of the national operators).

Sprint PCS and AT&T Wireless posted similar margins in the third quarter of 2003 with 30.4% and 31.7%, respectively. AT&T Wireless saw its margins increase by 3.1% year-over-year and 1.6% sequentially. This was AT&T Wireless's third consecutive quarter of sequential margin improvement. Sprint PCS posted a 4.5% annual increase and was flat sequentially. T-Mobile posted the lowest margin of the nationals in the third quarter at 24.3%; however, this did represent a year-over-year increase of 16.4% (but a sequential decline of 4%).

Cingular was the only national operator to post declines on a sequential and a year-over-year basis in the third quarter of 2003. Cingular's 28.3% EBITDA margin in the third quarter was a 2.8% decrease year-over-year and a 7.5% decrease sequentially. In its most recent 10-Q filing, Cingular pointed to extensive customer retention and customer service initiatives in anticipation of wireless local number portability as well as increased network system operating costs as a result of its ongoing growth in customer usage and incremental costs related to its current network system GSM upgrade.

U.S. Cellular's year-over-year comparisons are skewed by its acquisition of the Chicagoland properties (which had much lower EBITDA margins) from PCS PrimeCo in the third quarter of 2002.

In Table 39, we present the operating cash flow margin before marketing expenses. Nextel continues to post much stronger margin than the other national operators at 63.4%. Triton PCS tops out the affiliate space with an EBITDAM margin of 48.5%.

In Table 40, we detail the annual growth in operating cash flow (EBITDA). Among the national operators, T-Mobile reported another quarter of strong year-over-year growth at 356.8%. Cingular, Centennial Cellular, and Cincinnati Bell were the only three companies in our survey that posted year-over-year declines.

U.S. Cellular was able to turn around a four consecutive quarter decline by posting year-over-year growth of 19.4% in the third quarter of 2003. In the third quarter, U.S. Cellular completed its billing system conversion on time, and during its recent earnings conference call management said that the company was already enjoying an improved cost structure. For instance, on its second quarter call, U.S. Cellular said that it was incurring about \$8 million in incremental G&A expenses from running two billing systems. These expenses went away in the third quarter.

In Table 41, we calculated the monthly operating cash flow generated per average subscriber. For the national operators, Nextel continues to lead in this category with \$31.35. Nextel's higher ARPU and lower churn and CCPU compared to other carriers have helped the company maintain the lead in this metric throughout our entire survey period.

Verizon Wireless, AT&T Wireless, and Sprint PCS continue to post EBITDA per average subscriber per month in close proximity to one another. In the third quarter of 2003, the range was \$0.28 from the lowest to highest (Verizon Wireless at \$20.04 to Sprint PCS at \$19.76). We believe this indicates that beyond a certain point of scale, costs are mostly variable in nature and the larger operators do not appear to have a significant cost advantage. T-Mobile reported \$13.06 EBITDA per average sub per month. In the third quarter of 2003, Cingular's monthly EBITDA per average subscriber dropped strongly to \$14.62 versus \$18.83 in the second quarter of 2003 and \$16.48 in the year-ago period.

Among the affiliates, Triton PCS is producing similar EBITDA per average subscriber metrics to the national operators, beating all the nationals except Nextel with \$24.86 in the third quarter of 2003. However, the strong EBITDA results for Triton PCS and some of the regional operators can be attributed to these carriers' reliance on high-margin roaming business. In other words, "foreign" subscribers (that aren't in the denominator of EBITDA per subscriber per month) generate a great deal of EBITDA for these carriers, thereby aiding their performance for this particular measure.

Because we are in a much more cautious market environment, we believe investors will reward operators that demonstrate profitable growth through a combination of top-line growth and expense control. To better analyze how companies perform under this metric, we refer to Table 42, which shows the EBITDA conversion ratio. This table shows the year-over-year change in EBITDA divided by the year-over-year change in service revenues. In effect, this calculates the incremental EBITDA margin for each incremental dollar of service revenue.

As shown in the table, the majority of the national operators posted strong EBITDA conversion ratios, with the exception of Cingular. The five national providers (excluding Cingular) saw increases over the second quarter. In the third quarter of 2003, AT&T Wireless and Sprint PCS saw the largest sequential increases in their EBITDA conversion ratios among the national operators.

In Table 43, we calculate incremental EBITDA per incremental average subscriber per month. For this calculation, we take the annual incremental EBITDA and divide by the annual incremental average subscriber, divided by three (for the number of months in a quarter).

Table 37: Operating Cash Flow (\$ in thousands)

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Verizon Wireless	\$1,309,000	\$1,499,000	\$1,647,000	\$1,773,000	\$1,861,000	\$1,781,000	\$1,937,000	\$2,124,000
AT&T Wireless	\$666,000	\$822,000	\$1,044,000	\$1,075,000	\$919,000	\$1,110,000	\$1,186,000	\$1,291,000
Nextel	\$538,650	\$586,000	\$816,000	\$878,000	\$886,000	\$906,000	\$1,004,000	\$1,129,000
Cingular	\$1,048,000	\$1,117,000	\$1,177,000	\$1,094,000	\$983,000	\$1,204,000	\$1,264,000	\$1,009,000
Sprint PCS	\$367,000	\$640,000	\$764,000	\$729,000	\$729,000	\$758,000	\$868,000	\$912,000
T-Mobile	(\$78,680)	\$59,866	\$156,016	\$101,000	\$128,000	\$307,335	\$501,216	\$461,367
<b>Total National</b>	<b>\$3,849,970</b>	<b>\$4,723,866</b>	<b>\$5,604,016</b>	<b>\$5,650,000</b>	<b>\$5,506,000</b>	<b>\$6,066,335</b>	<b>\$6,760,216</b>	<b>\$6,926,367</b>
<b>Affiliate Operators</b>								
Triton PCS	\$18,420	\$36,022	\$45,985	\$50,510	\$33,949	\$45,323	\$64,981	\$65,804
Nextel Partners	(\$18,844)	(\$17,882)	(\$5,747)	\$7,865	\$18,388	\$25,991	\$34,710	\$55,772
Alamosa PCS	(\$20,364)	\$3,109	\$6,374	\$5,359	\$12,077	\$17,136	\$30,211	\$31,947
US Unwired	(\$22,314)	(\$21,112)	(\$473)	(\$1,907)	\$6,060	\$5,176	\$15,805	\$22,368
AirGate PCS	(\$14,637)	\$1,102	\$3,237	(\$5,629)	\$2,712	\$15,467	\$14,250	\$15,256
UbiquiTel	(\$18,736)	(\$11,685)	(\$10,049)	(\$8,553)	(\$3,752)	\$226	\$5,158	\$11,117
Horizon PCS	(\$21,764)	(\$16,343)	(\$14,373)	(\$15,679)	(\$17,792)	(\$11,953)	(\$12,360)	NAV
<b>Total Affiliate</b>	<b>(\$98,239)</b>	<b>(\$26,789)</b>	<b>\$24,954</b>	<b>\$31,966</b>	<b>\$51,642</b>	<b>\$97,366</b>	<b>\$152,755</b>	<b>\$202,264</b>
<b>Regional Operators</b>								
Alltel	\$379,169	\$351,444	\$364,957	\$406,224	\$405,978	\$397,156	\$427,355	\$437,414
US Cellular	\$151,451	\$152,428	\$177,681	\$165,573	\$136,638	\$126,814	\$161,230	\$197,753
Dobson Communications	\$97,486	\$81,318	\$105,258	\$118,880	\$105,562	\$107,834	\$128,915	\$130,771
Western Wireless	\$73,558	\$84,887	\$91,969	\$93,672	\$97,086	\$97,848	\$105,044	\$112,556
Rural Cellular	\$42,609	\$50,401	\$58,711	\$60,729	\$47,668	\$51,143	\$60,943	\$68,713
Centennial Cellular	\$32,067	\$33,135	\$45,466	\$45,058	\$39,611	\$34,338	\$41,428	\$39,537
Leap Wireless (Cricket)	(\$105,993)	(\$55,726)	(\$24,100)	(\$26,700)	\$8,585	\$15,133	\$23,700	\$37,113
Centennial PCS	\$19,742	\$17,896	\$22,863	\$20,964	\$22,892	\$24,054	\$28,703	\$31,791
Cincinnati Bell	\$16,500	\$23,200	\$26,100	\$30,100	\$21,000	\$27,000	\$30,000	\$26,900
Century Telephone	\$40,934	\$59,300	\$46,300	NAV	NAV	NAV	NAV	NAV
<b>Total Regional</b>	<b>\$747,523</b>	<b>\$798,283</b>	<b>\$915,205</b>	<b>\$914,500</b>	<b>\$885,020</b>	<b>\$881,320</b>	<b>\$1,007,318</b>	<b>\$1,082,548</b>
<b>Total Industry EBITDA</b>	<b>\$4,499,254</b>	<b>\$5,495,360</b>	<b>\$6,544,175</b>	<b>\$6,596,466</b>	<b>\$6,442,662</b>	<b>\$7,045,021</b>	<b>\$7,920,289</b>	<b>\$8,211,179</b>
<b>Year-over-year Change</b>	<b>41.2%</b>	<b>29.3%</b>	<b>24.4%</b>	<b>28.0%</b>	<b>43.2%</b>	<b>28.2%</b>	<b>21.0%</b>	<b>24.2%</b>

Source: Company reports and UBS estimates

Table 38: EBITDA as Percentage of Service Revenue

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Nextel	30.6%	32.0%	40.2%	41.0%	40.6%	41.0%	42.1%	43.4%
Verizon Wireless	32.5%	37.0%	37.7%	38.4%	39.5%	38.2%	38.7%	40.1%
AT&T Wireless	20.5%	24.5%	28.8%	28.6%	24.6%	29.7%	30.1%	31.7%
Sprint PCS	15.1%	25.1%	28.1%	25.9%	26.3%	28.3%	30.4%	30.4%
Cingular	31.2%	33.7%	33.7%	31.0%	28.8%	36.0%	35.8%	28.3%
T-Mobile	-8.1%	5.8%	13.5%	7.9%	9.1%	19.7%	28.3%	24.3%
<b>National EBITDA Margin</b>	<b>24.4%</b>	<b>29.3%</b>	<b>32.2%</b>	<b>31.2%</b>	<b>30.2%</b>	<b>33.3%</b>	<b>34.7%</b>	<b>33.9%</b>
<b>Affiliate Operators</b>								
Triton PCS	13.0%	23.9%	26.5%	27.5%	20.0%	25.7%	33.3%	33.0%
Nextel Partners	-16.2%	-14.0%	-3.7%	4.5%	9.6%	13.0%	15.3%	21.4%
Alamosa PCS	-18.2%	2.6%	5.1%	3.8%	8.5%	12.6%	20.2%	20.2%
AirGate PCS	-22.9%	1.5%	4.1%	-6.6%	3.4%	20.9%	17.7%	17.7%
US Unwired	-22.2%	-18.7%	-0.4%	-1.4%	4.4%	4.4%	12.3%	16.4%
UbiquiTel	-45.0%	-26.8%	-19.4%	-14.5%	-6.4%	0.4%	8.1%	16.0%
Horizon PCS	-51.5%	-35.7%	-28.6%	-28.9%	-30.7%	-20.8%	-20.1%	NAV
<b>Affiliate EBITDA Margin</b>	<b>-15.9%</b>	<b>-4.0%</b>	<b>3.3%</b>	<b>3.8%</b>	<b>6.2%</b>	<b>11.9%</b>	<b>16.9%</b>	<b>22.2%</b>
<b>Regional Operators</b>								
Rural Cellular	41.6%	49.6%	51.4%	51.2%	44.6%	46.5%	49.7%	52.8%
Dobson Communications	39.8%	37.0%	42.1%	44.8%	42.9%	45.8%	49.4%	47.3%
Western Wireless	35.6%	42.7%	43.6%	43.0%	46.0%	46.5%	46.0%	45.3%
Centennial Cellular	38.9%	41.3%	51.2%	49.8%	47.8%	43.1%	49.4%	44.4%
Centennial PCS	37.4%	31.2%	36.2%	33.4%	38.5%	38.7%	43.3%	44.3%
Cincinnati Bell	27.5%	38.3%	39.7%	46.2%	35.0%	44.3%	46.2%	43.5%
Alltel	40.4%	38.4%	37.8%	38.6%	38.1%	37.9%	37.9%	37.6%
US Cellular	32.8%	33.1%	35.5%	29.5%	23.7%	22.5%	26.4%	31.5%
Leap Wireless (Cricket)	-113.4%	-43.5%	-16.7%	-18.6%	5.7%	9.4%	14.6%	23.1%
Century Telephone	38.6%	59.2%	44.3%	NAV	NAV	NAV	NAV	NAV
<b>Regional EBITDA Margin</b>	<b>29.7%</b>	<b>32.1%</b>	<b>34.3%</b>	<b>33.5%</b>	<b>32.8%</b>	<b>33.1%</b>	<b>35.3%</b>	<b>36.6%</b>

Source: Company reports and UBS estimates

**Table 39: Operating Cash Flow Before Marketing as Percentage of Service Revenue (EBITDAM)**

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Nextel	58.7%	58.7%	63.2%	64.1%	63.9%	63.4%	64.0%	63.4%
T-Mobile	45.6%	46.9%	51.8%	56.7%	55.1%	55.8%	58.2%	56.5%
Sprint PCS	44.8%	48.7%	48.2%	48.4%	50.1%	49.7%	51.6%	52.4%
AT&T Wireless	45.6%	47.6%	48.2%	48.0%	46.9%	48.1%	47.9%	48.1%
<b>Affiliate Operators</b>								
Triton PCS	43.1%	45.6%	47.9%	46.9%	42.5%	45.4%	49.8%	48.5%
UbiquiTel	13.6%	18.0%	17.2%	24.9%	31.4%	34.4%	38.0%	45.4%
Nextel Partners	27.0%	26.9%	32.7%	37.4%	40.9%	40.4%	42.3%	45.3%
Alamosa PCS	23.6%	31.5%	29.9%	32.3%	36.0%	38.9%	42.4%	43.1%
US Unwired	18.3%	11.3%	24.3%	21.9%	27.8%	27.8%	30.6%	35.1%
AirGate PCS	21.4%	30.9%	30.1%	21.6%	29.6%	37.3%	36.5%	33.6%
Horizon PCS	-0.8%	1.9%	-3.7%	-5.5%	-0.2%	7.7%	3.0%	NAV
<b>Regional Operators</b>								
Rural Cellular	59.4%	64.7%	65.9%	67.8%	65.5%	64.1%	64.8%	67.0%
Centennial PCS	61.4%	59.8%	59.9%	59.4%	64.3%	63.9%	65.5%	65.5%
Western Wireless	59.1%	59.7%	62.1%	61.5%	64.9%	63.3%	63.5%	62.8%
Centennial Cellular	58.3%	60.2%	64.1%	62.9%	61.6%	60.5%	61.5%	57.7%
Alltel	58.9%	58.1%	56.4%	56.3%	55.5%	55.8%	56.6%	55.9%
Cincinnati Bell	55.6%	51.8%	53.2%	55.0%	47.3%	53.8%	56.5%	53.2%
US Cellular	53.8%	53.1%	53.8%	50.3%	50.3%	46.3%	46.2%	50.4%
Leap Wireless (Cricket)	11.2%	31.7%	39.8%	34.9%	41.1%	33.4%	38.3%	45.6%
Century Telephone	60.0%	NAV						

Source: Company reports and UBS estimates

Table 40: Year-Over-Year Growth in Operating Cash Flow

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
T-Mobile	NM	NM	NM	NM	NM	413.4%	221.3%	356.8%
Nextel	28.6%	66.4%	68.8%	67.0%	64.5%	54.6%	23.0%	28.6%
Sprint PCS	1647.6%	153.0%	55.6%	81.3%	98.6%	18.4%	13.6%	25.1%
AT&T Wireless	66.9%	4.4%	21.7%	33.8%	38.0%	35.0%	13.6%	20.1%
Verizon Wireless	7.2%	10.1%	8.3%	12.1%	42.2%	18.8%	17.6%	19.8%
Cingular	22.9%	14.9%	-6.0%	-11.3%	-6.2%	7.8%	7.4%	-7.8%
<b>Affiliate Operators</b>								
Nextel Partners	NM	NM	NM	NM	NM	NM	NM	609.1%
Alamosa PCS	NM	NM	NM	NM	NM	451.2%	374.0%	496.1%
Triton PCS	NM	246.0%	200.3%	155.3%	84.3%	25.8%	41.3%	30.3%
AirGate PCS	NM	NM	NM	NM	NM	1303.5%	340.2%	NM
<b>Regional Operators</b>								
Centennial PCS	10.6%	-3.1%	-3.9%	16.5%	16.0%	34.4%	25.5%	51.6%
Western Wireless	-14.2%	-6.7%	-3.2%	9.6%	32.0%	15.3%	14.2%	20.2%
US Cellular	34.0%	17.4%	6.6%	-2.6%	-9.8%	-16.8%	-9.3%	19.4%
Rural Cellular	19.2%	17.9%	14.6%	6.9%	11.9%	1.5%	3.8%	13.1%
Dobson Communications	33.0%	13.2%	1.8%	0.4%	8.3%	32.6%	22.5%	10.0%
Alltel	17.6%	3.4%	2.4%	9.5%	7.1%	13.0%	17.1%	7.7%
Cincinnati Bell	345.9%	57.8%	71.7%	54.4%	27.3%	16.4%	14.9%	-10.6%
Centennial Cellular	-26.5%	8.2%	41.2%	17.8%	23.5%	3.6%	-8.9%	-12.3%
Century Telephone	-2.3%	42.8%	-0.7%	NAV	NAV	NAV	NAV	NAV

Source: Company reports and UBS estimates

**Table 41: Operating Cash Flow per Average Subscriber per Month**

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Nextel	\$21.33	\$21.91	\$28.93	\$29.63	\$28.50	\$27.83	\$29.39	\$31.35
Verizon Wireless	\$15.03	\$16.94	\$18.33	\$19.12	\$19.38	\$18.04	\$19.01	\$20.04
AT&T Wireless	\$12.56	\$14.58	\$17.63	\$17.87	\$14.94	\$17.63	\$18.56	\$19.85
Sprint PCS	\$9.41	\$15.33	\$17.64	\$16.70	\$16.60	\$17.04	\$19.15	\$19.76
Cingular	\$16.30	\$17.15	\$17.83	\$16.48	\$14.89	\$18.23	\$18.83	\$14.62
T-Mobile	(\$3.94)	\$2.75	\$6.68	\$3.98	\$4.54	\$9.87	\$15.00	\$13.06
<b>Affiliate Operators</b>								
Triton PCS	\$9.42	\$17.09	\$20.68	\$21.59	\$13.91	\$17.86	\$24.86	\$24.86
Nextel Partners	(\$13.22)	(\$10.68)	(\$2.93)	\$3.54	\$7.40	\$9.41	\$11.51	\$16.96
Alamosa PCS	(\$15.32)	\$1.96	\$3.84	\$3.10	\$6.74	\$9.06	\$15.03	\$15.61
AirGate PCS	(\$18.59)	\$1.19	\$3.15	(\$5.60)	\$2.61	\$14.50	\$13.14	\$14.06
UbiquiTel	(\$39.64)	(\$20.26)	(\$16.10)	(\$12.63)	(\$5.09)	\$0.28	\$6.08	\$12.43
US Unwired	(\$18.95)	(\$15.32)	(\$0.30)	(\$1.18)	\$3.68	\$3.03	\$8.94	\$12.22
Horizon PCS	(\$42.20)	(\$26.35)	(\$20.93)	(\$21.91)	(\$23.13)	(\$14.11)	(\$13.64)	NAV
<b>Regional Operators</b>								
Rural Cellular	\$21.69	\$25.07	\$28.42	\$28.88	\$22.30	\$23.50	\$27.68	\$30.96
Western Wireless	\$21.01	\$24.23	\$26.37	\$26.67	\$27.26	\$27.02	\$28.61	\$30.29
Dobson Communications	\$24.83	\$20.62	\$26.68	\$29.40	\$25.48	\$25.58	\$28.88	\$27.72
Centennial PCS	\$21.46	\$18.07	\$21.35	\$19.51	\$21.30	\$21.17	\$24.24	\$25.81
Centennial Cellular	\$21.03	\$21.06	\$28.19	\$27.96	\$24.82	\$21.41	\$25.58	\$24.19
Cincinnati Bell	\$12.23	\$16.69	\$18.60	\$21.44	\$14.97	\$19.14	\$21.40	\$19.37
Alltel	\$19.13	\$17.50	\$17.88	\$18.45	\$17.90	\$17.29	\$18.20	\$18.45
US Cellular	\$14.80	\$14.59	\$16.83	\$14.55	\$11.38	\$10.12	\$12.52	\$15.43
Leap Wireless (Cricket)	(\$39.31)	(\$14.73)	(\$5.68)	(\$6.04)	\$1.90	\$3.33	\$5.31	\$8.42
Century Telephone	\$17.14	\$24.92	\$19.63	NAV	NAV	NAV	NAV	NAV

Source: Company reports and UBS estimates

Table 42: EBITDA Conversion Ratio

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Sprint PCS	44.8%	52.3%	41.9%	60.3%	103.4%	93.7%	75.9%	97.9%
AT&T Wireless	43.9%	8.1%	36.9%	51.0%	50.9%	74.2%	45.2%	70.1%
T-Mobile	61.3%	71.8%	90.0%	63.2%	47.6%	47.3%	55.7%	58.0%
Nextel	35.5%	69.6%	79.6%	78.1%	81.6%	84.4%	53.3%	54.6%
Verizon Wireless	29.2%	42.7%	41.6%	44.7%	80.9%	46.4%	45.2%	51.2%
Cingular	52.1%	57.8%	-48.7%	NM	NM	NM	NM	NM
<b>National Weighted Average</b>	44.8%	48.2%	47.9%	51.6%	67.9%	65.4%	54.9%	55.3%
<b>Affiliate Operators</b>								
UbiquiTel	-30.8%	-9.8%	6.3%	13.5%	90.1%	93.8%	130.8%	189.4%
Alamosa PCS	4.2%	25.4%	31.8%	38.2%	104.3%	89.1%	101.2%	177.0%
Triton PCS	56.1%	58.5%	65.9%	67.8%	55.7%	36.3%	88.7%	98.0%
Nextel Partners	10.4%	7.7%	24.6%	38.3%	49.9%	60.2%	55.4%	55.6%
AirGate PCS	13.4%	38.4%	36.6%	16.4%	115.8%	NM	NM	NM
US Unwired	7.9%	-2.5%	12.6%	13.1%	73.5%	NM	NM	NM
Horizon PCS	-15.9%	-13.5%	7.6%	10.7%	25.5%	38.0%	17.9%	NAV
<b>Affiliate Weighted Average</b>	7.7%	16.1%	26.6%	32.0%	68.3%	85.7%	92.5%	236.9%
<b>Regional Operators</b>								
Centennial PCS	24.5%	-5.9%	-6.2%	23.4%	47.3%	126.9%	191.8%	119.4%
Dobson Communications	69.5%	108.0%	119.2%	-7.1%	NM	170.0%	NM	103.2%
Cincinnati Bell	100.0%	123.2%	158.0%	NM	NM	NM	NM	97.0%
Rural Cellular	84.0%	91.2%	128.5%	NM	113.8%	8.9%	26.7%	69.4%
Western Wireless	163.8%	40.9%	19.7%	NM	NM	109.3%	73.7%	61.9%
US Cellular	94.5%	60.8%	27.6%	-5.4%	-13.1%	-24.8%	-15.1%	47.9%
Alltel	110.6%	23.0%	15.3%	27.7%	21.1%	34.6%	38.5%	28.2%
Centennial Cellular	112.6%	NM	NM	NM	NM	NM	82.1%	NM
Leap Wireless (Cricket)	NM	-14.4%	20.7%	55.4%	196.7%	NM	NM	NM
Century Telephone	53.4%	NM	12.0%	NAV	NAV	NAV	NAV	NAV
<b>Regional Weighted Average</b>	27.2%	28.3%	32.3%	35.9%	65.6%	39.8%	42.1%	66.4%

Source: Company reports and UBS estimates

Table 43: Incremental EBITDA per Incremental Average Subscriber per Month

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Sprint PCS	\$28.46	\$32.51	\$24.88	\$39.93	\$73.71	\$43.34	\$51.28	\$73.23
AT&T Wireless	\$19.89	\$3.49	\$17.70	\$28.63	\$29.85	\$43.72	\$30.34	\$44.43
Nextel	\$19.98	\$39.41	\$56.53	\$60.20	\$59.44	\$55.12	\$31.56	\$39.28
T-Mobile	\$28.44	\$30.59	\$45.59	\$33.66	\$25.06	\$26.36	\$34.33	\$36.24
Verizon Wireless	\$10.20	\$17.38	\$17.36	\$24.54	\$62.04	\$27.51	\$24.01	\$26.54
Cingular	\$30.04	\$30.11	(\$22.12)	(\$52.59)	(\$38.48)	\$94.62	\$78.27	(\$32.09)
<b>Affiliate Operators</b>								
AirGate PCS	\$10.29	\$26.61	\$20.96	\$11.31	\$69.23	\$101.86	\$200.72	\$260.53
US Unwired	\$7.33	(\$2.17)	\$10.76	\$10.58	\$60.76	\$79.21	\$89.97	\$112.46
UbiquiTel	(\$27.01)	(\$7.12)	\$4.99	\$10.06	\$56.69	\$54.64	\$67.97	\$90.44
Alamosa PCS	\$3.55	\$18.46	\$19.28	\$25.46	\$69.98	\$45.75	\$68.31	\$83.25
Triton PCS	\$32.01	\$37.41	\$48.68	\$53.69	\$32.03	\$21.61	\$48.78	\$49.75
Nextel Partners	\$8.19	\$5.47	\$17.51	\$27.14	\$35.12	\$40.29	\$38.31	\$44.86
Horizon PCS	(\$11.85)	(\$9.53)	\$5.09	\$6.63	\$15.67	\$19.35	\$9.18	NAV
<b>Regional Operators</b>								
Cincinnati Bell	\$28.33	\$27.30	\$51.43	\$84.03	\$82.87	\$184.90	(\$4,340.57)	\$205.13
Western Wireless	(\$26.42)	(\$20.25)	(\$16.64)	\$81.03	\$393.12	\$110.92	\$71.16	\$92.64
Centennial PCS	\$6.13	(\$1.72)	(\$2.82)	\$12.98	\$20.33	\$42.15	\$51.64	\$68.81
Rural Cellular	\$21.98	\$32.46	\$41.37	\$22.56	\$29.15	\$4.46	\$16.42	\$68.43
US Cellular	\$28.19	\$23.76	\$13.86	(\$3.18)	(\$8.34)	(\$12.28)	(\$7.09)	\$22.50
Alltel	\$42.81	\$9.32	\$6.62	\$14.27	\$9.35	\$15.88	\$20.30	\$18.50
Dobson Communications	NAV	\$20.02	\$5.88	\$1.59	\$37.26	\$97.99	\$45.62	\$17.68
Centennial Cellular	(\$80.93)	\$15.50	\$98.92	\$63.51	\$105.66	\$40.10	(\$611.82)	(\$237.46)
Leap Wireless (Cricket)	(\$23.15)	(\$4.91)	\$7.08	\$17.43	\$63.07	\$93.68	\$220.28	(\$4,008.10)
Century Telephone	(\$6.44)	NAV	NAV	NAV	NAV	NAV	NAV	NAV

Source: Company reports and UBS estimates

## Capital Expenditures

In Table 44, we rank the wireless service operators' capital spending from highest to lowest. We have compiled data on most of the operators we track for this category. The total capital expenditures in the third quarter of 2003 for these operators were \$4.7 billion, a 15.8% year-over-year decline from third quarter 2002. Lower year-over-year capital expenditures were realized across all segments (i.e., national, regional, and affiliate operators). The third quarter of 2003 also represented the seventh consecutive quarter of year-over-year declines in total capital investment.

We believe capital expenditures have reached a point in which coverage capex is mostly spent and future capex will be largely driven by technology upgrade requirements and capacity needs. We also believe certain carriers spent more on quality initiatives—such as better in-building penetration (i.e., building repeaters)—in advance of wireless local number portability. At our Global Communications conference in November, Sprint PCS mentioned its focus on the increasing need for in-building coverage. Sprint PCS reported third quarter 2003 capital expenditures of \$491 million bringing its year-to-date capex spending to only \$1.2 billion. However, the company maintained its full-year guidance of \$2.1 billion.

Of the national operators, AT&T Wireless posted the largest year-over-year decline in capital investment spending. With much of its initial GSM build-out spending behind it, we believe the company is focusing on GSM coverage sites and other quality-related spending. AT&T Wireless's capex (including internal use software) was \$943 million in the third quarter of 2003 leaving year-to-date capex spending for AT&T Wireless at \$1.913 billion. The company reiterated its \$3.1 billion capex guidance for 2003. On its third quarter 2003 call, AT&T Wireless said that its EDGE rollout was almost complete and that it had spent about \$300-350 million on the effort. On November 18, 2003, AT&T Wireless commercially launched its EDGE service.

T-Mobile saw its third consecutive quarter of year-over-year declines, with a decline of 10.5% from third quarter 2002 to third quarter 2003. At our conference, T-Mobile mentioned that it anticipates the same "pace" of capex spend for next year. T-Mobile doesn't expect any real growth in covered POPs and will continue to spend on existing coverage areas.

Verizon Wireless saw its capital expenditures grow 6.7% year over year in the third quarter. In the company's most recent 10-Q filing, management mentioned that capital expenditures were used primarily to increase the capacity of the company's wireless network for usage demand, facilitate the introduction of new products and services, enhance responsiveness to competitive challenges and increase the operating efficiency and productivity of the wireless network.

In our recent note, “Meeting with Verizon Wireless” (dated December 10, 2003), we mentioned that there has been confusion on why rolling out 1XRTT hasn’t led to lower capex spending by Verizon Wireless. We believe 1X offers more spectral efficiency but doesn’t necessarily save big capex dollars, for the most part. A reason for this is that Verizon Wireless still has to invest in items such as voice channels regardless of whether a conversation is over IS-95 or 1XRTT. Using 1XRTT means that Verizon Wireless doesn’t have to buy additional spectrum as quickly but it doesn’t lessen the need for voice channels. Put another way, every customer with a 1X handset uses about half the spectrum that customer would have used on an IS-95 network, but not half the voice channels.

Like its remarkably consistent subscriber results, Nextel has posted steady capital expenditure figures. During the third quarter of 2003, Nextel invested \$403 million versus \$402 million in the second quarter of 2003 and \$401 million in the third quarter of 2002. Year to date, Nextel has spent \$1.1 billion on capex. On its third quarter 2003 call, management maintained its guidance for full-year 2003 capital expenditures of \$1.8 billion or less, which suggests a ramp-up in spending in the fourth quarter. Specifically, Nextel said that it will be building more coverage cell sites.

Nextel said that it is now deploying 6:1 vocoder software in the network to facilitate significant increases in network capacity. Management said that it will also introduce new 6:1 handsets with assisted GPS and improved battery life in order to take advantage of the improved calling capacity the 6:1 vocoder offers. However, Nextel won’t likely experience meaningful benefits from the new vocoder until 2004.

In Table 45, we detail the annual growth in capital expenditures for the operators for which we have data. However, capital expenditures tend to be lumpy from quarter to quarter, making annual comparisons on a quarterly basis basically meaningless for several operators.

As for the regional operators, after five consecutive quarters of year-over-year increases in capital expenditures, U.S. Cellular reported a decline in the third quarter of 2003. However, we believe U.S. Cellular is still aggressively moving forward with its CDMA build. In addition to completing the CDMA overlay in Oklahoma and Missouri, in the third quarter U.S. Cellular also worked on the CDMA overlay in the New England area. Moreover, during the third quarter of 2003 U.S. Cellular began building out some of the new licenses it acquired from AT&T Wireless. U.S. Cellular indicated that the initial build-outs in its Oklahoma City and St. Louis markets could take about 18 months to complete “soup-to-nuts.”

In Table 46, we show capital expenditures per net addition, which has been a traditional metric for the wireless industry. However, we believe this metric is becoming less relevant, as increased usage from new and existing subscribers has fueled capital expenditures.

Since subscriber usage is becoming more widely available for the operators we track, we calculated capital expenditures per incremental minute of use in Table 47. We calculate capital expenditures per incremental minute of use by dividing the sum of the trailing 12 months of capital expenditures by the incremental minutes of use. We calculate the incremental minutes of use by subtracting the total annualized minutes of use for the year-ago quarter (average MOU times average subscribers times 12 months) from the total annualized minutes of use for the current quarter.

In our calculation, we did not adjust for “net” roaming minutes (the inbound roaming traffic from other carriers less the MOUs of their subscribers used on other operator’s networks). Therefore, we overestimated the capital expenditures per incremental minute of use for operators with an inbound to outbound roaming ratio of greater than one.

In Table 48, we calculate capital expenditures as a percentage of service revenues. Historically, we believe the figures posted have been relatively high, particularly when comparing them with results around the world.

Nextel ranked as the most efficient operator at 15.5% in the third quarter of 2003, followed closely by Sprint PCS, which posted 15.7%. AT&T Wireless, T-Mobile, and Cingular all posted results above 20% for the third quarter of 2003, with Cingular posting 28.2%. Most of the affiliate and regional operators were below 20% for the quarter as well, except for U.S. Cellular, Dobson Communications, and Cincinnati Bell. However, we would again note that capex spending from quarter to quarter can be lumpy. We think it might be more meaningful to look at a rolling 12 months capex spending to service revenues to smooth out anomalous spending.

In Table 49, we show total cell sites and in Table 50 we display incremental cell sites. As can be seen, many operators do not report cell sites consistently. As for the slowdown in cell site building, we highlight Nextel, which added roughly 480 cell sites in the first nine months of 2003 versus about 580 in the year-ago period. Nextel has focused on adding radios to increase capacity, as opposed to additional cell sites. Adding cell sites is far more expensive than simply adding radio channels to existing cell sites, since there are many non-hardware-related costs required to add a cell site (including labor and the costs of negotiating a site location). Having said that, Nextel’s cell site build has ramped up each quarter throughout 2003.

At our Global Communications Conference in November, T-Mobile said that it expects to have 26,000 cell sites by year-end 2003, with 3,500 added this year.

For AT&T Wireless, its incremental cell sites ballooned in the first quarter of 2002 as a result of its TeleCorp acquisition. Also, in the first quarter of 2003 and the fourth quarter of 2002, AT&T Wireless turned on for commercial service a batch of new GSM sites. AT&T Wireless ended the third quarter of 2003 with about 23,800 cell sites versus 22,777 cell sites in the second quarter of 2003. Of the 1,023 new cell sites, the company said that it added 900 new GSM sites. We believe the balance of the new cell sites could be from the acquired markets AT&T Wireless picked up from U.S. Cellular this quarter. Also, management said that it installed 850 MHz GSM radios in about 1,500 sites in the third quarter of 2003 mainly in the New York City area.

For U.S. Cellular, incremental cell sites jumped in the third quarter of 2002 because of its PrimeCo Wireless acquisition. In the fourth quarter of 2002, U.S. Cellular continued to expand the coverage of its acquired Chicago market. In the third quarter of 2003, U.S. Cellular sold certain markets to AT&T Wireless, thereby accounting for its negative incremental cell sites for the quarter.

In Table 51, we show covered POPs per cell site. For the most part, carriers that operate predominately in the 800 MHz band rank well, given the superior propagation characteristics of the spectrum band. The next most important criterion for this measure simply is carriers that operate in large markets. Since national operators operate in the major metro areas, they are likely to have a high number of covered POPs per cell site.

In Table 52, we show average subscribers per cell site. Again, a key factor simply is the difference between 800 MHz and 1900 MHz. When comparing Verizon Wireless's average subscribers per cell site with that of Sprint PCS, the latter has to build more sites to support the same geographic area, since Verizon Wireless mostly operates in the cellular band. This is also a reason why AT&T Wireless ranks well, as about one-half of its markets are at the 800 MHz band.

In Table 53, we show total minutes of use per cell site and in Table 54, we show incremental usage per incremental cell site. For these calculations, we excluded "net" roaming minutes again. However, in this case, we underestimated these metrics for operators with an inbound to outbound roaming ratio greater than one. For Table 53, the CDMA operators rank well again because of the superior capacity of the technology.

Table 44: Capital Expenditures (\$ in thousands)

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Nextel	594,000	474,000	448,000	401,000	533,000	305,000	402,000	403,000
T-Mobile	330,573	418,707	488,000	456,000	589,000	378,000	402,000	408,000
Sprint PCS	854,000	578,000	800,000	625,000	565,000	168,250	514,250	472,250
AT&T Wireless	1,890,000	662,000	866,000	1,210,000	2,146,000	403,000	495,000	876,000
Verizon Wireless	1,664,000	819,000	1,269,000	921,000	1,373,000	1,107,000	989,000	983,000
Cingular	1,676,000	455,000	906,000	1,263,000	1,310,000	401,000	756,000	1,008,000
<b>Total National Capital Expenditures</b>	<b>7,008,573</b>	<b>3,406,707</b>	<b>4,777,000</b>	<b>4,876,000</b>	<b>6,516,000</b>	<b>2,762,250</b>	<b>3,558,250</b>	<b>4,150,250</b>
<b>Affiliate Operators</b>								
UbiquiTel	14,256	21,104	13,485	7,040	1,500	4,645	2,465	5,631
AirGate PCS	6,300	22,322	10,500	9,058	5,626	1,028	3,715	7,106
US Unwired	49,714	68,402	23,944	35,493	23,913	9,829	8,376	8,156
Alamosa PCS	40,665	17,000	29,600	9,300	14,100	9,100	3,312	13,400
Triton PCS	30,000	40,500	24,400	41,600	59,400	18,900	26,900	18,600
Nextel Partners	60,013	57,372	81,704	64,317	47,448	55,753	32,913	40,546
Horizon PCS	26,224	23,438	25,675	8,508	5,462	2,209	3,441	NAV
<b>Total Affiliates Capital Expenditures</b>	<b>227,172</b>	<b>250,138</b>	<b>209,308</b>	<b>175,316</b>	<b>157,449</b>	<b>101,464</b>	<b>81,122</b>	<b>93,439</b>
<b>Regional Operators</b>								
Leap Wireless (Cricket)	303,767	153,331	82,625	46,968	84,817	5,693	14,415	8,300
Centennial Cellular	8,905	5,913	4,549	9,045	9,141	7,576	18,449	8,930
Centennial PCS	18,929	29,380	8,866	13,320	12,115	11,038	13,927	11,211
Rural Cellular	15,735	8,765	16,866	15,887	18,317	5,600	14,200	12,800
Cincinnati Bell	18,200	7,700	13,100	4,400	4,300	2,100	14,000	16,100
Western Wireless	110,990	35,275	30,468	40,409	54,524	30,605	33,700	37,737
Dobson Communications	24,263	31,100	42,769	30,031	28,800	30,200	48,400	67,200
US Cellular	118,964	90,852	145,209	185,898	276,615	138,837	155,624	126,327
Alltel	281,865	131,380	236,767	219,425	178,823	154,552	218,927	191,709
Century Telephone	18,690	6,137	NAV	NAV	NAV	NAV	NAV	NAV
<b>Total Regional Capital Expenditures</b>	<b>920,308</b>	<b>499,833</b>	<b>581,219</b>	<b>565,383</b>	<b>667,452</b>	<b>386,201</b>	<b>531,642</b>	<b>480,314</b>
<b>Total Capital Expenditures</b>	<b>8,156,053</b>	<b>4,156,678</b>	<b>5,567,527</b>	<b>5,616,699</b>	<b>7,340,901</b>	<b>3,249,915</b>	<b>4,171,014</b>	<b>4,724,003</b>
<b>Year over Year Change (%)</b>	<b>8.6%</b>	<b>-21.1%</b>	<b>-12.4%</b>	<b>-2.8%</b>	<b>-9.8%</b>	<b>-21.7%</b>	<b>-25.1%</b>	<b>-15.8%</b>

Note: Year-over-year comparison calculations are based on current data. Therefore, the historical data comparisons have been adjusted to account for fewer data points in the present data. Figures exclude internal use software costs.

Source: Company reports and UBS estimates

Table 45: Year-Over-Year Growth in Capital Expenditures

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
AT&T Wireless	78%	-47%	-21%	5%	14%	-39%	-43%	-28%
Sprint PCS	-5%	-7%	-22%	-44%	-34%	-71%	-36%	-24%
Cingular	64%	13%	53%	79%	-22%	-12%	-17%	-20%
T-Mobile	-43%	-30%	4%	18%	78%	-10%	-18%	-11%
Nextel	-38%	-26%	-27%	-25%	-10%	-36%	-10%	0%
Verizon Wireless	-14%	-17%	-8%	-5%	-17%	35%	-22%	7%
<b>Affiliate Operators</b>								
US Unwired	-39%	91%	-64%	-13%	-52%	-86%	-65%	-77%
Triton PCS	-38%	-34%	-59%	-36%	98%	-53%	10%	-55%
Nextel Partners	-44%	-37%	-41%	-25%	-21%	-3%	-60%	-37%
AirGate PCS	-36%	95%	-39%	-38%	-11%	-95%	-65%	-22%
UbiquiTel	-54%	-47%	-46%	-82%	-89%	-78%	-82%	-20%
Alamosa PCS	-7%	-51%	-23%	-72%	-65%	-46%	-89%	44%
Horizon PCS	-22%	-27%	-24%	-65%	-79%	-91%	-87%	NAV
<b>Regional Operators</b>								
Leap Wireless (Cricket)	132%	78%	-57%	-76%	-72%	-96%	-83%	-82%
US Cellular	25%	-24%	13%	54%	133%	53%	7%	-32%
Rural Cellular	-38%	21%	54%	32%	16%	-36%	-16%	-19%
Centennial PCS	-4%	-4%	-71%	-75%	-36%	-62%	57%	-16%
Alltel	4%	12%	-17%	131%	-37%	18%	-8%	-13%
Western Wireless	243%	41%	-52%	-35%	-51%	-13%	11%	-7%
Centennial Cellular	-21%	-52%	-49%	-20%	3%	28%	306%	-1%
Dobson Communications	-46%	-21%	-28%	-33%	19%	-3%	13%	124%
Cincinnati Bell	-54%	-21%	13%	-65%	-76%	-73%	7%	266%
Century Telephone	-4%	-67%	NAV	NAV	NAV	NAV	NAV	NAV

Source: Company reports and UBS estimates

Table 46: Capital Expenditures per Net Add

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
T-Mobile	\$495	\$823	\$1,078	\$523	\$579	\$410	\$663	\$609
Nextel	\$1,186	\$944	\$951	\$835	\$1,060	\$635	\$680	\$624
Verizon Wireless	\$2,327	\$6,941	\$1,755	\$1,147	\$1,424	\$1,339	\$764	\$699
Cingular	\$5,157	\$1,944	\$2,567	NM	NM	\$2,122	\$1,400	\$1,353
Sprint PCS	\$767	\$797	\$2,597	NM	\$2,260	\$845	\$1,428	\$2,567
AT&T Wireless	\$2,039	\$1,018	\$2,077	\$6,020	\$3,044	\$1,568	\$1,110	\$3,825
<b>National Weighted Average</b>	\$1,649	\$1,244	\$1,753	\$2,246	\$1,964	\$961	\$927	\$1,069
<b>Year over Year Change (%)</b>	34.8%	8.1%	33.7%	70.5%	19.1%	-22.7%	-47.1%	-52.4%
<b>Affiliate Operators</b>								
UbiquiTel	\$301	\$914	\$859	\$419	\$67	\$270	\$140	\$427
Nextel Partners	\$735	\$673	\$903	\$691	\$510	\$642	\$370	\$445
Alamosa PCS	\$411	\$354	\$1,480	\$465	\$455	\$294	\$138	\$838
US Unwired	\$706	\$1,484	\$1,224	\$15,938	\$1,203	\$427	\$943	\$3,071
Triton PCS	\$442	\$1,207	\$550	\$1,262	\$1,764	\$600	\$1,413	\$5,214
AirGate PCS	\$115	\$619	\$921	\$4,934	\$412	\$179	\$664	NM
Horizon PCS	\$552	\$821	\$2,071	\$1,251	\$188	\$92	\$228	NAV
<b>Affiliate Weighted Average</b>	\$485	\$832	\$979	\$1,009	\$649	\$463	\$453	\$767
<b>Year over Year Change (%)</b>	-57.2%	-24.9%	-22.3%	38.7%	33.8%	-44.4%	-53.7%	-23.2%
<b>Regional Operators</b>								
Leap Wireless (Cricket)	\$770	\$571	\$1,296	\$1,040	\$5,512	\$4,195	NM	\$454
Centennial PCS	\$1,577	\$842	\$467	\$987	\$717	\$458	\$1,786	\$467
Centennial Cellular	\$788	\$279	\$875	NM	NM	\$861	\$9,225	\$1,116
Western Wireless	\$5,842	NM	\$5,253	\$3,742	\$2,513	\$1,672	\$2,232	\$1,797
US Cellular	\$1,451	\$2,931	\$3,377	\$2,446	\$1,729	\$1,013	\$1,511	\$1,914
Alltel	\$2,966	\$1,637	\$2,952	\$3,244	\$3,465	\$3,198	\$2,703	\$3,860
Dobson Communications	\$443	\$1,376	\$1,195	\$1,004	\$800	\$2,517	\$2,630	\$4,667
Rural Cellular	\$1,098	\$539	\$812	\$21,211	\$936	\$884	\$1,377	\$8,713
Cincinnati Bell	\$725	\$3,208	\$2,079	NM	\$915	\$6,977	NM	NM
Century Telephone	\$6,984	NAV	NAV	NAV	NAV	NAV	NAV	NAV
<b>Regional Weighted Average</b>	\$1,217	\$1,106	\$2,077	\$2,438	\$2,177	\$1,514	\$2,294	\$2,647
<b>Year over Year Change (%)</b>	37.9%	41.6%	31.6%	149.8%	14.2%	-14.8%	-0.6%	-4.6%

Notes: Year-over-year comparison calculations are based on current data. Therefore, the historical data comparisons have been adjusted to account for fewer data points in the present data.

Source: Company reports and UBS estimates

Table 47: Capex per Incremental MOU

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
T-Mobile	NAV	NAV	NAV	NAV	\$0.06	\$0.05	\$0.04	\$0.04
Sprint PCS	\$0.09	\$0.08	\$0.06	\$0.07	\$0.08	\$0.07	\$0.06	\$0.04
Nextel	\$0.11	\$0.11	\$0.10	\$0.09	\$0.09	\$0.08	\$0.07	\$0.06
Verizon Wireless	\$0.15	\$0.16	\$0.13	\$0.11	\$0.09	\$0.09	\$0.07	\$0.07
AT&T Wireless	\$0.20	\$0.15	\$0.12	\$0.12	\$0.12	\$0.15	\$0.16	\$0.14
Cingular	NAV	\$0.11	\$0.13	\$0.18	\$0.24	\$0.27	\$0.26	\$0.17
<b>Affiliate Operators</b>								
UbiquiTel	\$0.10	\$0.07	\$0.06	\$0.06	\$0.06	\$0.04	\$0.02	\$0.01
Alamosa PCS	\$0.08	\$0.06	\$0.07	\$0.07	\$0.07	\$0.06	\$0.03	\$0.02
Triton PCS	\$0.12	\$0.10	\$0.08	\$0.07	\$0.07	\$0.05	\$0.04	\$0.03
Nextel Partners	\$0.19	\$0.16	\$0.11	\$0.10	\$0.08	\$0.08	\$0.06	\$0.05
AirGate PCS	\$0.03	\$0.03	\$0.02	\$0.02	\$0.04	\$0.05	\$0.05	NAV
Horizon PCS	NAV	\$0.11	\$0.09	\$0.09	\$0.09	\$0.05	NAV	NAV
<b>Regional Operators</b>								
Centennial PCS	\$0.19	\$0.13	\$0.09	\$0.07	\$0.05	\$0.04	\$0.04	\$0.03
Western Wireless	\$0.19	\$0.25	\$0.25	\$0.17	\$0.12	\$0.09	\$0.09	\$0.09
US Cellular	\$0.14	\$0.15	\$0.14	\$0.10	\$0.09	\$0.08	\$0.08	\$0.09
Centennial Cellular	\$0.13	\$0.09	\$0.06	\$0.05	\$0.06	\$0.08	\$0.12	\$0.12

Note: MOU figures exclude inbound roaming minutes, which results in the calculation being overstated for companies with an inbound to outbound roaming minute ratio in excess of one.

Source: Company reports and UBS estimates

Table 48: Capital Expenditures as Percentage of Service Revenues

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Nextel	33.8%	25.9%	22.0%	18.7%	24.4%	13.8%	16.9%	15.5%
Sprint PCS	35.2%	22.6%	29.4%	22.2%	20.4%	6.3%	18.0%	15.7%
Verizon Wireless	41.3%	20.2%	29.0%	20.0%	29.1%	23.8%	19.7%	18.6%
AT&T Wireless	58.3%	19.7%	23.9%	32.1%	57.4%	10.8%	12.6%	21.5%
T-Mobile	34.0%	40.4%	42.4%	35.6%	41.8%	24.2%	22.7%	21.5%
Cingular	49.8%	13.7%	25.9%	35.8%	38.4%	12.0%	21.4%	28.2%
<b>Affiliate Operators</b>								
US Unwired	49.5%	60.7%	18.0%	25.6%	17.2%	8.3%	6.5%	6.0%
UbiquiTel	34.3%	48.5%	26.0%	12.0%	2.6%	8.3%	3.9%	8.1%
AirGate PCS	9.9%	30.7%	13.3%	10.7%	7.1%	1.4%	4.6%	8.3%
Alamosa PCS	36.4%	14.2%	23.5%	6.5%	9.9%	6.7%	2.2%	8.5%
Triton PCS	21.2%	26.9%	14.0%	22.6%	35.0%	10.7%	13.8%	9.3%
Nextel Partners	51.7%	44.9%	53.3%	36.9%	24.9%	27.8%	14.5%	15.6%
Horizon PCS	62.0%	51.1%	51.1%	15.7%	9.4%	3.8%	5.6%	NAV
<b>Regional Operators</b>								
Leap Wireless (Cricket)	325.0%	119.8%	57.2%	32.7%	55.9%	3.5%	8.9%	5.2%
Rural Cellular	15.4%	8.6%	14.8%	13.4%	17.1%	5.1%	11.6%	9.8%
Centennial Cellular	10.8%	7.4%	5.1%	10.0%	11.0%	9.5%	22.0%	10.0%
Western Wireless	53.7%	17.8%	14.5%	18.6%	25.8%	14.5%	14.7%	15.2%
Centennial PCS	35.9%	51.2%	14.0%	21.2%	20.4%	17.7%	21.0%	15.6%
Alltel	30.0%	14.4%	24.5%	20.8%	16.8%	14.8%	19.4%	16.5%
US Cellular	25.8%	19.7%	29.0%	33.1%	48.1%	24.6%	25.5%	20.1%
Dobson Communications	9.9%	14.1%	17.1%	11.3%	11.7%	12.8%	18.6%	24.3%
Cincinnati Bell	30.4%	12.7%	19.9%	6.7%	7.2%	3.4%	21.6%	26.0%
Century Telephone	17.6%	6.1%	NAV	NAV	NAV	NAV	NAV	NAV

Source: Company reports and UBS estimates

Table 49: Cell Sites

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
AT&T Wireless	14,958	19,104	19,229	19,684	21,064	22,144	22,777	23,800
Cingular	18,000	NAV	NAV	NAV	20,112	NAV	20,650	21,000
T-Mobile	15,400	NAV	NAV	NAV	18,600	NAV	NAV	20,500
Sprint PCS	17,670	18,025	18,300	18,700	19,300	19,700	20,100	20,400
Verizon Wireless	16,700	17,200	17,700	18,300	18,457	19,200	19,500	19,863
Nextel	15,500	15,900	15,950	16,080	16,300	16,429	16,574	16,780
<b>Affiliate Operators</b>								
Nextel Partners	2,788	2,856	3,029	3,207	3,317	3,409	3,496	3,557
Triton PCS	2,039	2,104	2,153	2,180	2,218	2,223	2,238	2,256
US Unwired	1,341	1,645	1,727	1,754	1,796	1,831	1,850	1,864
Alamosa PCS	1,391	1,425	1,467	1,483	1,509	1,512	1,525	1,539
UbiquiTel	766	794	805	816	826	837	842	850
AirGate PCS	760	770	780	785	790	795	795	800
Horizon PCS	1,085	1,194	1,258	1,298	1,338	1,344	NAV	NAV
<b>Regional Operators</b>								
US Cellular	2,925	3,049	3,145	3,750	3,914	3,987	4,106	4,082
Dobson Communications	NAV	NAV	1,626	1,646	1,667	1,701	1,711	1,730
Western Wireless	1,220	1,240	1,250	1,250	1,250	1,280	1,290	1,300
Rural Cellular	684	684	698	712	732	765	770	776
Centennial Cellular	671	681	691	697	704	707	722	745
Centennial PCS	291	303	309	298	307	323	350	360
Leap Wireless (Cricket)	2,186	2,323	2,366	2,424	2,446	NAV	NAV	NAV
Century Telephone	739	NAV						

Source: Company reports and UBS estimates

Table 50: Incremental Cell Sites (quarter over quarter)

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
AT&T Wireless	827	4,146	125	455	1,380	1,080	633	1,023
Verizon Wireless	350	500	500	600	157	743	300	363
Cingular	1,000	NAV	NAV	NAV	NAV	NAV	NAV	350
Sprint PCS	870	355	275	400	600	400	400	300
Nextel	1,000	400	50	130	220	129	145	206
<b>Affiliate Operators</b>								
Nextel Partners	232	68	173	178	110	92	87	61
Triton PCS	78	65	49	27	38	5	15	18
US Unwired	510	304	82	27	42	35	19	14
Alamosa PCS	136	34	42	16	26	3	13	14
UbiquiTel	30	28	11	11	10	11	5	8
AirGate PCS	41	10	10	5	5	5	0	5
Horizon PCS	98	109	64	40	40	6	NAV	NAV
<b>Regional Operators</b>								
Centennial Cellular	21	10	10	6	7	3	15	23
Dobson Communications	NAV	NAV	NAV	20	21	34	10	19
Centennial PCS	26	12	6	(11)	9	16	27	10
Western Wireless	20	20	10	0	0	30	10	10
Rural Cellular	NAV	0	14	14	20	33	5	6
US Cellular	121	124	96	605	164	73	119	(24)
Leap Wireless (Cricket)	624	137	43	58	22	NAV	NAV	NAV

Source: Company reports and UBS estimates

Table 51: Covered POPs per Cell Site (in thousands)

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Nextel	13	12	12	12	12	12	12	12
Verizon Wireless	13	13	13	12	12	12	12	12
T-Mobile	10	NAV	NAV	NAV	12	NAV	NAV	11
Cingular	11	NAV	NAV	NAV	11	NAV	10	11
Sprint PCS	11	11	10	11	10	10	10	10
AT&T Wireless	11	11	10	10	10	10	10	9
<b>Affiliate Operators</b>								
Nextel Partners	12	12	12	11	11	11	11	11
UbiquiTel	9	9	9	9	9	9	9	9
Alamosa PCS	8	8	8	8	8	8	8	8
AirGate PCS	8	8	8	8	7	7	8	8
US Unwired	8	7	7	7	7	7	7	7
Triton PCS	5	5	5	5	5	5	5	5
Horizon PCS	6	6	6	6	6	6	NAV	NAV
<b>Regional Operators</b>								
Centennial PCS	43	41	42	31	30	29	27	26
US Cellular	9	9	9	10	9	9	9	9
Centennial Cellular	9	9	9	9	9	9	8	8
Western Wireless	8	8	8	8	8	8	8	8
Rural Cellular	9	9	8	8	8	8	8	8
Dobson Communications	NAV	NAV	7	7	6	6	6	6
Leap Wireless (Cricket)	11	11	11	10	10	NAV	NAV	NAV
Century Telephone	11	NAV						

Source: Company reports and UBS estimates

Table 52: Average Subscribers per Cell Site

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Verizon Wireless	1,739	1,715	1,692	1,689	1,734	1,714	1,742	1,778
Cingular	1,191	NAV	NAV	NAV	1,094	NAV	1,084	1,096
AT&T Wireless	1,182	984	1,027	1,019	974	948	935	911
Sprint PCS	736	772	789	778	758	753	752	754
Nextel	543	561	589	614	636	661	687	716
T-Mobile	432	NAV	NAV	NAV	506	NAV	NAV	575
<b>Affiliate Operators</b>								
AirGate PCS	345	401	440	427	438	447	455	452
Alamosa PCS	319	371	377	388	396	417	439	443
Triton PCS	320	334	344	358	367	381	389	391
UbiquiTel	206	242	258	277	297	317	336	351
US Unwired	293	279	306	307	305	311	319	327
Nextel Partners	170	195	216	231	250	270	287	308
Horizon PCS	158	173	182	184	192	210	NAV	NAV
<b>Regional Operators</b>								
Centennial PCS	1,054	1,089	1,155	1,202	1,167	1,173	1,128	1,141
US Cellular	1,166	1,142	1,119	1,012	1,023	1,048	1,045	1,046
Rural Cellular	957	980	986	984	973	948	953	953
Western Wireless	957	942	930	937	950	943	949	953
Centennial Cellular	757	770	778	771	756	756	748	731
Dobson Communications	NAV	NAV	809	819	828	826	870	909
Leap Wireless (Cricket)	411	543	598	608	615	NAV	NAV	NAV
Century Telephone	1,077	NAV						

Source: Company reports and UBS estimates

**Table 53: Total Minutes of Use per Cell Site per Month (in thousands)**

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Verizon Wireless	490	504	580	620	675	689	784	855
Sprint PCS	397	440	521	513	500	527	601	633
Nextel	320	331	383	399	407	429	495	529
AT&T Wireless	473	423	495	493	494	482	515	504
Cingular	419	NAV	NAV	NAV	444	NAV	482	500
T-Mobile	189	NAV	NAV	NAV	294	NAV	NAV	405
<b>Affiliate Operators</b>								
Triton PCS	140	152	177	191	220	262	309	327
UbiquiTel	134	153	163	176	193	217	256	276
Alamosa PCS	140	165	167	169	181	213	235	254
Nextel Partners	95	104	131	142	155	163	195	219
AirGate PCS	197	311	363	361	318	358	398	NAV
Horizon PCS	79	86	99	102	106	129	NAV	NAV
<b>Regional Operators</b>								
Centennial PCS	552	617	687	744	848	869	931	1,020
US Cellular	276	271	313	331	367	395	443	455
Western Wireless	295	289	332	355	378	388	431	455
Centennial Cellular	139	148	170	186	192	190	203	214
Leap Wireless (Cricket)	473	668	702	705	787	NAV	NAV	NAV

Note: MOU figures exclude inbound roaming minutes, which results in the calculation being understated for companies with an inbound to outbound roaming minute ratio in excess of one.

Source: Company reports and UBS estimates

**Table 54: Incremental Usage per Incremental Cell Site (year-over-year, in thousands)**

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Verizon Wireless	NAV	NAV	4,280	4,423	5,847	5,331	6,058	7,729
Sprint PCS	1,431	2,070	3,118	2,757	3,232	3,452	3,526	4,886
Nextel	992	856	1,013	1,313	1,943	3,693	3,832	4,631
AT&T Wireless	NAV	NAV	NAV	1,029	1,078	1,636	1,243	1,090
T-Mobile	NAV	NAV	NAV	NAV	1,276	NAV	NAV	NAV
Cingular	NAV	NAV	NAV	NAV	1,688	NAV	NAV	NAV
<b>Affiliate Operators</b>								
Triton PCS	534	751	975	1,250	2,222	4,990	8,578	10,485
Alamosa PCS	87	176	330	273	274	1,413	3,188	5,044
UbiquiTel	202	221	319	(1,278)	(37)	1,035	3,071	3,920
Nextel Partners	65	78	103	171	305	350	445	911
AirGate PCS	850	2,196	2,830	4,508	5,363	1,067	3,614	NAV
Horizon PCS	NAV	NAV	288	216	161	661	NAV	NAV
<b>Regional Operators</b>								
Western Wireless	4,551	3,212	3,080	5,690	10,683	9,505	8,902	7,358
Centennial PCS	230	1,220	2,512	4,558	13,636	9,942	6,671	5,464
US Cellular	1,472	1,294	1,501	1,167	1,481	1,871	1,930	4,168
Centennial Cellular	693	1,035	1,726	2,469	3,434	3,639	2,821	1,737
Leap Wireless (Cricket)	NAV	NAV	NAV	NAV	2,265	NAV	NAV	NAV

Note: MOU figures exclude inbound roaming minutes, which results in the calculation being understated for companies with an inbound to outbound roaming minute ratio in excess of one.

Source: Company reports and UBS estimates

## Financial Leverage and Liquidity

In Tables 55-59, we present selected leverage and liquidity ratios for the wireless operators that provide relevant data. Additionally, we calculate the equity free cash flow (before taxes and working capital) for selected operators.

In Table 55, we rank the total net debt and preferred debt or stock for the companies we track. The calculation adds all long-term and short-term debt and any preferred stock or debt issued, then subtracts each company's cash. However, we do not include the mandatory convertible equity units at Sprint PCS in the net debt calculation because they are treated as mostly equity and are mandatory to be converted into stock.

As shown in Table 55, while Sprint PCS has the highest net debt of the operators we track, the company has reduced net debt over the past three quarters, posting \$15.35 billion in the third quarter of 2003. Verizon Wireless, T-Mobile, and Cingular ranged between \$8.9-14.4 billion in net debt for the quarter. AT&T Wireless posted the smallest amount of the national operators at \$6.4 billion for the third quarter of 2003. Of the companies we track, the total net debt comes to about \$81.6 billion, which is a decrease of 7.9% year over year. Total net debt to annualized EBITDA has fallen to 2.51 times annualized EBITDA in the third quarter of 2003 from 3.41 times in the third quarter of 2002, and 2.81 times in the second quarter of 2003.

In Table 56, we rank the total net debt and preferred stock and debt to annualized EBITDA for each of the companies for which we have data. As would be expected, AT&T Wireless, the national provider with the lowest total net debt, also has one of the lowest net debt to annualized EBITDA of the national providers at 1.25 times in the third quarter of 2003 (the lowest result over the entire measurement period). Sprint PCS showed good progress in this ratio, improving sequentially from 5.56 times in the third quarter of 2002 to 4.21 times in the third quarter of 2003. Nextel has made significant progress in its debt to EBITDA ratio, improving from a high of 6.27 times in the fourth quarter of 2001 to 1.98 times in the third quarter of 2003.

In Table 57, we show the net interest and preferred interest and dividends for each of the companies for which we have data. We arrive at this figure by adding all reported interest expense and preferred interest and dividends, then subtracting out reported interest income. For this calculation, we include the interest expense from mandatory convertible equity units, because this is still a cash expense for these companies (i.e., Sprint PCS).

In Table 58, we rank the EBITDA to net interest (including PIKs) coverage ratio. As can be seen in the table, the larger and more established operators are at a point where EBITDA is far exceeding net interest requirements. The two strongest examples for the third quarter of 2003 are Verizon Wireless and U.S.

Cellular both at 13.0 times. The other national providers—AT&T Wireless, Cingular, Nextel, Sprint PCS, and T-Mobile range from 2.3 times to 6.4 times.

Finally, in Table 59, we ranked the operators by pretax equity free cash flow. We calculated equity free cash flow before income taxes (essentially zero for the bulk of the wireless operators) and incremental working capital changes (typically minimal). For this calculation, we subtracted net interest expense (including preferred interest/dividends) and capital expenditures from operating cash flow (EBITDA). Based on this calculation, four of the six national providers reported positive free cash flow in the third quarter of 2003 (up from two carriers in the year-ago period and flat with second quarter 2003 results).

Verizon Wireless took the lead for the second consecutive quarter with \$978 million in free cash flow, with a sizable gap between the second place carrier, Nextel, which reported \$514 million for the third quarter of 2003. AT&T Wireless was third with positive free cash flow for the quarter of \$213 million. Sprint PCS posted a positive \$57.8 million in free cash flow for the quarter (third quarter 2003 was the second quarter that Sprint PCS has had positive results during the measurement period). Cingular, which led the group in the first quarter, placed last with \$(196) million. T-Mobile has yet to post positive free cash flow results.

Of the 16 companies for which we have a free cash flow figure, eight reported positive free cash flow in the third quarter. Triton PCS was the only affiliate operator to be free cash flow positive in the third quarter of 2003. At our recent Global Communications Conference, Nextel Partners said that it is still aiming to be free cash flow positive in the first quarter of 2004; however for the third quarter of 2003 the company had negative free cash flow of \$21.6 million.

Table 55: Total Net Debt and Preferred Debt

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Sprint PCS	16,512,000	16,746,000	16,268,000	16,213,000	16,454,000	16,371,000	15,821,000	15,353,000
Verizon Wireless	15,149,000	15,436,000	13,796,000	14,185,000	13,382,000	14,124,000	14,267,000	14,392,001
T-Mobile	12,640,939	13,263,339	13,678,000	13,619,905	14,866,640	15,183,972	15,689,716	12,516,875
Cingular	11,964,000	12,208,000	12,009,000	12,098,000	11,693,000	11,250,000	11,683,000	11,358,000
Nextel	13,512,291	14,033,570	13,469,000	12,349,000	10,879,000	10,695,000	10,372,000	8,921,000
AT&T Wireless	3,353,000	6,788,000	7,138,000	7,428,000	8,855,000	7,672,000	6,704,000	6,441,000
<b>Affiliate Operators</b>								
Nextel Partners	804,512	961,172	1,124,074	1,253,050	1,306,421	1,380,704	1,520,776	1,548,331
Triton PCS	1,125,591	1,176,056	1,177,002	1,233,747	1,371,846	1,360,020	1,451,995	1,425,065
Alamosa PCS	666,710	713,987	739,047	769,174	772,400	787,272	787,587	796,618
US Unwired	476,273	586,626	596,453	646,941	672,017	674,161	682,276	687,895
UbiquiTel	282,970	313,373	347,522	380,675	393,463	350,418	345,886	347,733
AirGate PCS	330,777	352,894	382,710	394,334	410,579	358,311	356,457	340,973
Horizon PCS	391,276	440,040	512,204	544,748	583,440	619,595	650,135	NAV
<b>Regional Operators</b>								
Western Wireless	2,204,929	2,261,047	2,334,443	2,371,863	2,393,452	2,386,575	2,317,800	2,252,412
Leap Wireless (Cricket)	1,637,041	1,925,542	2,033,401	2,080,599	2,129,637	2,036,179	2,156,324	2,118,171
Rural Cellular	1,797,368	1,794,377	1,797,229	1,796,940	1,805,785	1,811,057	1,807,301	1,805,787
US Cellular	638,215	584,931	563,992	1,190,694	1,296,796	1,322,797	1,390,232	1,261,267
<b>Total Net Debt (1)</b>	<b>83,486,893</b>	<b>89,584,954</b>	<b>87,966,078</b>	<b>88,555,670</b>	<b>89,265,477</b>	<b>88,383,061</b>	<b>88,003,485</b>	<b>81,566,128</b>
<b>Total Net Debt to Annualized EBITDA (1)</b>	<b>4.75</b>	<b>4.18</b>	<b>3.43</b>	<b>3.41</b>	<b>3.51</b>	<b>3.17</b>	<b>2.81</b>	<b>2.51</b>

(1) Net debt, including PIKs, for companies for which we have data.

Source: Company reports and UBS estimates

Table 56: Total Net Debt and Preferred to Annualized EBITDA

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
AT&T Wireless	1.26	2.06	1.71	1.73	2.41	1.73	1.41	1.25
Verizon Wireless	2.89	2.57	2.09	2.00	1.80	1.98	1.84	1.69
Nextel	6.27	5.99	4.13	3.52	3.07	2.95	2.58	1.98
Cingular	2.85	2.73	2.55	2.76	2.97	2.34	2.31	2.81
Sprint PCS	11.25	6.54	5.32	5.56	5.64	5.40	4.56	4.21
T-Mobile	NM	55.39	21.92	33.71	29.04	12.35	7.83	6.78
<b>Affiliate Operators</b>								
Triton PCS	15.28	8.16	6.40	6.11	10.10	7.50	5.59	5.41
AirGate PCS	NM	80.06	29.56	NM	37.85	5.79	6.25	5.59
Alamosa PCS	NM	57.41	28.99	35.88	15.99	11.49	6.52	6.23
Nextel Partners	NM	NM	NM	39.83	17.76	13.28	10.95	6.94
US Unwired	NM	NM	NM	NM	27.72	32.56	10.79	7.69
UbiquiTel	NM	NM	NM	NM	NM	387.63	16.76	7.82
<b>Regional Operators</b>								
US Cellular	1.05	0.96	0.79	1.80	2.37	2.61	2.16	1.59
Western Wireless	7.49	6.66	6.35	6.33	6.16	6.10	5.52	5.00
Rural Cellular	10.55	8.90	7.65	7.40	9.47	8.85	7.41	6.57
Leap Wireless (Cricket)	NM	NM	NM	NM	62.02	33.64	22.75	14.27

Source: Company reports and UBS estimates

Table 57: Net Interest Expense and PIK Dividend/Interest

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
T-Mobile	103,869	67,000	74,000	105,037	149,000	152,782	167,339	95,147
Verizon Wireless	NM	153,000	141,000	141,000	167,000	168,000	150,000	162,999
Cingular	228,000	225,000	221,000	233,000	232,000	225,000	230,000	197,000
AT&T Wireless	99,000	117,000	200,000	186,000	184,000	191,000	213,000	202,000
Nextel	311,484	321,000	315,000	307,000	258,000	243,000	232,000	212,000
Sprint PCS	277,000	319,000	403,000	355,000	384,000	387,000	387,000	382,000
<b>Affiliate Operators</b>								
UbiquiTel	10,669	10,440	10,873	11,459	11,591	9,934	6,887	6,843
AirGate PCS	8,334	8,512	8,741	8,538	9,963	10,017	10,732	11,409
US Unwired	14,462	16,757	19,779	20,515	20,930	20,690	21,249	23,715
Alamosa PCS	22,495	23,521	24,949	25,480	25,454	26,152	25,702	26,332
Nextel Partners	29,847	36,496	41,044	42,509	41,393	40,541	39,715	36,790
Triton PCS	49,572	33,596	40,298	44,348	39,283	39,401	43,613	36,953
Horizon PCS	11,304	14,851	17,311	18,176	19,029	19,042	19,937	NAV
<b>Regional Operators</b>								
US Cellular	8,186	7,993	7,294	12,577	15,603	14,884	16,068	15,177
Western Wireless	31,082	29,004	28,031	26,726	26,319	23,780	22,252	28,801
Rural Cellular	35,418	46,808	41,750	43,718	42,196	41,560	41,844	48,088
Centennial Cellular	NAV	NAV	NAV	38,273	36,994	36,331	32,674	49,598

Source: Company reports and UBS estimates

Table 58: EBITDA to Net Interest Including PIK Coverage

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Verizon Wireless	NM	9.80	11.68	12.57	11.14	10.60	12.91	13.03
AT&T Wireless	6.73	7.03	5.22	5.78	4.99	5.81	5.57	6.39
Nextel	1.73	1.83	2.59	2.86	3.43	3.73	4.33	5.33
Cingular	4.60	4.96	5.33	4.70	4.24	5.35	5.50	5.12
T-Mobile	NM	0.89	2.11	0.96	0.86	2.01	3.00	4.85
Sprint PCS	1.32	2.01	1.90	2.05	1.90	1.96	2.24	2.39
<b>Affiliate Operators</b>								
Triton PCS	0.37	1.07	1.14	1.14	0.86	1.15	1.49	1.78
UbiquiTel	NM	NM	NM	NM	NM	0.02	0.75	1.62
Nextel Partners	NM	NM	NM	0.19	0.44	0.64	0.87	1.52
AirGate PCS	NM	0.13	0.37	NM	0.27	1.54	1.33	1.34
Alamosa PCS	NM	0.13	0.26	0.21	0.47	0.66	1.18	1.21
US Unwired	NM	NM	NM	NM	0.29	0.25	0.74	0.94
<b>Regional Operators</b>								
US Cellular	18.50	19.07	24.36	13.16	8.76	8.52	10.03	13.03
Western Wireless	2.37	2.93	3.28	3.50	3.69	4.11	4.72	3.91
Rural Cellular	1.20	1.08	1.41	1.39	1.13	1.23	1.46	1.43
Centennial Cellular	NAV	NAV	NAV	1.18	1.07	0.95	1.27	0.80

Source: Company reports and UBS estimates

**Table 59: Free Cash Flow (EBITDA less capex less net interest and PIK dividend/interest expense)**

	4Q01	1Q02	2Q02	3Q02	4Q02	1Q03	2Q03	3Q03
<b>National Operators</b>								
Verizon Wireless	NAV	527,000	237,000	711,000	321,000	506,000	798,000	978,001
Nextel	(366,834)	(209,000)	53,000	170,000	95,000	358,000	370,000	514,000
AT&T Wireless	(1,323,000)	43,000	(22,000)	(321,000)	(1,411,000)	516,000	478,000	213,000
Sprint PCS	(764,000)	(257,000)	(439,000)	(251,000)	(220,000)	202,750	(33,250)	57,750
T-Mobile	(513,122)	(425,841)	(405,984)	(460,037)	(610,000)	(223,447)	(68,123)	(41,780)
Cingular	(856,000)	437,000	50,000	(402,000)	(559,000)	578,000	278,000	(196,000)
<b>Affiliate Operators</b>								
Triton PCS	(61,152)	(38,074)	(18,713)	(35,438)	(64,734)	(12,978)	(5,532)	10,251
UbiquiTel	(43,661)	(43,229)	(34,407)	(27,052)	(16,843)	(14,353)	(4,194)	(1,357)
AirGate PCS	(29,271)	(29,732)	(16,004)	(23,225)	(12,877)	4,422	(197)	(3,259)
Alamosa PCS	(83,524)	(37,412)	(48,175)	(29,421)	(27,477)	(18,116)	1,197	(7,785)
US Unwired	(86,490)	(106,271)	(44,196)	(57,915)	(38,783)	(25,343)	(13,820)	(9,503)
Nextel Partners	(108,704)	(111,750)	(128,495)	(98,961)	(70,453)	(70,303)	(37,918)	(21,564)
Horizon PCS	(59,291)	(54,632)	(57,360)	(42,363)	(42,283)	(33,204)	(35,737)	NAV
<b>Regional Operators</b>								
US Cellular	24,301	53,583	25,178	(32,902)	(155,580)	(26,907)	(10,462)	56,249
Western Wireless	(68,514)	20,608	33,470	26,537	16,243	43,463	49,092	46,018
Rural Cellular	(8,544)	(5,172)	95	1,124	(12,845)	3,983	4,899	7,825
Centennial Cellular	NAV	NAV	NAV	(2,260)	(6,524)	(9,569)	(9,695)	(18,991)

Source: Company reports and UBS estimates

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<b>Buy 1</b>	FSR is > 10% above the MRA, higher degree of predictability	<b>Buy 2</b>	FSR is > 10% above the MRA, lower degree of predictability	<b>Buy</b>	38%	35%
<b>Neutral 1</b>	FSR is between -10% and 10% of the MRA, higher degree of predictability	<b>Neutral 2</b>	FSR is between -10% and 10% of the MRA, lower degree of predictability	<b>Hold/Neutral</b>	51%	32%
<b>Reduce 1</b>	FSR is > 10% below the MRA, higher degree of predictability	<b>Reduce 2</b>	FSR is > 10% below the MRA, lower degree of predictability	<b>Sell</b>	11%	26%

1: Percentage of companies under coverage globally within this rating category.

2: Percentage of companies within this rating category for which investment banking (IB) services were provided within the past 12 months.

Source: UBS; as of 31 December 2003.

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## Companies mentioned

Company Name	Reuters	Rating	Price
<b>Airgate PCS Inc.</b> <sup>1,3b,10b</sup>	PCSA.OB	Not rated	US\$3.04
<b>Alamosa Holdings</b> <sup>3b,10a</sup>	ALMO.OB	Not rated	US\$4.98
<b>Alltel Corp.</b>	AT.N	Buy 1 (RRD)	US\$48.55
<b>AT&amp;T Wireless</b> <sup>3a,6</sup>	AWE.N	Buy 2 (RRD)	US\$8.55
<b>BellSouth Corp.</b> <sup>3a,10b</sup>	BLS.N	Neutral 1	US\$28.93
<b>Broadwing Inc.</b>	CBB.N	Not rated	US\$5.60
<b>CenturyTel, Inc.</b> <sup>10b,12</sup>	CTL.N	Neutral 1	US\$32.25
<b>Deutsche Telekom</b> <sup>3a,3b,10a,12</sup>	DTEGn.F	Neutral 2 (RRD)	€15.45
<b>Dobson</b> <sup>1</sup>	DCEL.OQ	Not rated	US\$7.87
<b>Leap Wireless</b> <sup>9</sup>	LWINQ.OB	Not rated	US\$0.05
<b>Nextel</b> <sup>1,3a,3b,6,10a</sup>	NXTL.O	Buy 2 (RRD)	US\$28.46
<b>Nextel Partners</b> <sup>1,3a,3b,7,10a</sup>	NXTP.O	Buy 2 (RRD)	US\$14.52
<b>Qwest Communications</b> <sup>10a</sup>	Q.N	Neutral 2	US\$4.25
<b>Rural Cellular Corp.</b>	RCCC.OB	Not rated	US\$7.50
<b>SBC Communications</b> <sup>3c,10a</sup>	SBC.N	Neutral 1	US\$26.45
<b>Sprint FON Group</b> <sup>3b,10a</sup>	FON.N	Reduce 2	US\$18.48
<b>Sprint PCS Group</b> <sup>3b,6,10b</sup>	PCS.N	Buy 2	US\$6.19
<b>Triton</b>	TPC.N	Neutral 2 (RRD)	US\$5.84
<b>UbiquiTel Inc.</b> <sup>1</sup>	UPCS.O	Not rated	US\$3.32
<b>U.S. Cellular Corp.</b> <sup>3c</sup>	USM.A	Neutral 2	US\$37.60
<b>US Unwired Inc.</b> <sup>1</sup>	UNWR.OB	Not rated	US\$1.20
<b>Verizon</b> <sup>3c,3b,10a,12</sup>	VZ.N	Neutral 1	US\$36.58
<b>Vodafone Group</b> <sup>3b,6,8,10a,12</sup>	VOD.L	Buy 1 (RRD)	149p
<b>Western Wireless</b> <sup>1</sup>	WWCA.O	Not rated	US\$21.14
<b>WorldCom Group</b> <sup>3a,10b</sup>	WCOEQ.PK	Not rated	US\$0.03

Price(s) as of Tuesday, January 13, 2004. Source: UBS.

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